JUGONNATH SUNKERSETT
PRESENTATION.

THE
ASIATIC SOCIETY OF BOMBAY
Town Hall, Bombay.

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Extract from London Times dated 25th November 1969 pp.8

£. 90,000 for Audubon set

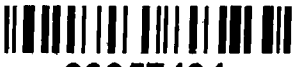
by GERALDINE KEEN
Sale Room Correspondent

Four volumes containing the 435 plates of Audubon's Birds of America were sold at Sotheby's yesterday for £. 90,000 to Mr. Kenneth Nebenzahl, a Chicago book dealer. Times have changed since in the early years of the nineteenth century John James Laforest Audubon, the American naturalist and artist, failed to interest any American publishers in his ambitious project to produce a major fully illustrated work on the Birds of America.

Hoping to fare better he came to England. The essential problem was to find an engraver prepared to work on the seven hundred plates he projected and to find enough subscribers for the work, which was issued in parts. Both were happily found. The work took 11 years to publish from 1827 to 1838 and by the end of the period the original 300 subscribers had dwindled to about 100.

This tremendously important and decorative work is thus extremely rare. Most sets are in public libraries; in other cases sets have been broken up and the plates sold separately.

This was one of the very few complete editions remaining in private hands, and was in unusually fine condition; the plates engraved in aquatint and coloured by hand had hardly suffered over the years. An extra point of interest was the addition of early states of 13 of the plates - early proofs before extra birds were added to the composition. Nevertheless the price was remarkable; a less distinguished set was sold for £. 21,429 at Parke Bernet in New York in 1966.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THE

BIRDS OF AMERICA,

FROM

DRAWINGS MADE IN THE UNITED STATES

AND THEIR TERRITORIES.

BY

JOHN JAMES AUDUBON, F. R. S., &c., &c.

57404

VOL. II.

NEW YORK:
V. G. AUDUBON
ROE LOCKWOOD & SON, 411 BROADWAY.
1860.

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598.73
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Entered according to Act of Congress, in the year 1839,
BY J. J. AUDUBON,
In the Clerk's Office of the District Court of the United States for the Southern District of New York.

R. CRAIGHEAD,
Printer, Stereotyper, and Electrotyper,
Carton Building,
91, 93, and 95 Centre Street.

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BIRDS OF AMERICA.

FAMILY VIII. SYLVICOLINÆ. WOOD-WARBLERS.

Bill short, or of moderate length, rather slender, somewhat conical, considerably broader than high at the base, gradually compressed toward the end; upper mandible with its dorsal outline straight until near the end, the point very narrow, the notches very slight; lower mandible with the angle rather short and narrow, the dorsal line straight, the edges somewhat involute, the tip acute. Head moderate, ovate; neck short; body rather slender. Feet of moderate length; tarsus longer than the middle toe, slender, much compressed, with eight anterior scutella, of which the upper are blended; toes rather small, or of moderate size, hind toe proportionally stout, outer adherent for a short way at the base; claws moderate, much compressed, arched, acute. Plumage generally soft and blended. Wings of moderate length. Tail of moderate length, of twelve feathers. Tongue of moderate length, sagittate, tapering. Œsophagus of moderate width, without dilatation; proventriculus bulbiform; stomach of moderate size, roundish or elliptical, moderately muscular, with the muscles distinct; epithelium dense, longitudinally rugous; intestine short, rather wide; cœca very small; cloaca oblong. Trachea simple, with four pairs of inferior laryngeal muscles.

Genus I.—MYIODIOCTES, *Aud.* FLYCATCHING-WARBLER.

Bill of moderate length, stoutish, straight, considerably broader than high, compressed toward the end; upper mandible with the ridge distinct, the dorsal line convex toward the end, the edges sharp and overlapping, with a

very faint notch close to the slightly deflected tip; lower mandible with the ridge indistinct, the sides rounded, the edges somewhat involute, the tip narrow, not ascending. Nostrils basal, oblong. Head ovate, of moderate size; neck short; body rather slender. Feet of moderate length; tarsus pretty stout, much compressed; scutella blended, excepting the lower three; toes of moderate length, very slender, the hind toe proportionally large, the third and fourth united at the base, all scutellate. Claws moderate, extremely compressed, well arched, very acute. Bristles at the base of the bill elongated but slender. Wings of moderate length, the second and third quills longest, the first scarcely shorter than the fourth. Tail moderate, slightly rounded. Name from Μυῖα, an insect, Διώκτης, a pursuer.

THE HOODED FLYCATCHING-WARBLER.

MYIODIOCTES MITRATA, *Lath.*

PLATE LXXI.—MALE AND FEMALE.

In many parts of our woods, the traveller, as he proceeds, cannot help stopping to admire the peaceful repose that spreads its pleasing charm on all around. The tall trees are garlanded with climbing plants, which have entwined their slender stems around them, creeping up the crevices of the deeply furrowed bark, and vying with each other in throwing forth the most graceful festoons, to break the straight lines of the trunks which support them; while here and there from the taller branches, numberless grape-vines hang in waving clusters, or stretch across from tree to tree. The underwood shoots out its branches, as if jealous of the noble growth of the larger stems, and each flowering shrub or plant displays its blossoms, to tempt the stranger to rest awhile, and enjoy the beauty of their tints, or refresh his nerves with their rich odours. Reader, add to this scene the pure waters of a rivulet, and you may have an idea of the places in which you will find the Hooded Warbler.

The Southern and Western States are those to which this beautiful bird gives a preference. It abounds in Louisiana, along the Mississippi, and by the Ohio nearly to Cincinnati. It is equally plentiful in the northern parts of the Floridas, Georgia, and the two Carolinas, after which it becomes rare. None, I believe, are ever seen east of the State of New York. It enters the lower parts of Louisiana about the middle of March, and by the beginning of

Hooded Flycatching Warbler.

Enthryna herbacea.

1 Male 2 Female

Drawn from Nature by J.J.Audubon FRSELS. Lith.d Printed & Col.d by J.T.Bowen Philad.a

May has laid its eggs, or sometimes even hatched them. It arrives in South Carolina in April, immediately constructs its nest, and has young quite as soon as in Louisiana.

The Hooded Flycatcher is one of the liveliest of its tribe, and is almost continually in motion. Fond of secluded places, it is equally to be met with in the thick cane brakes of the high or low lands, or amid the rank weeds and tangled bushes of the lowest and most impenetrable swamps. You recognise it instantly on seeing it, for the peculiar graceful opening and closing of its broad tail distinguishes it at once, as it goes on gambolling from bush to bush, now in sight, now hid from your eye, but constantly within hearing.

Its common call-note so resembles that of the Painted Finch or Nonpareil, that it requires a practised ear to distinguish them. Its song, however, is very different. It is rather loud, lively, yet mellow, and consists of three notes, resembling the syllables *weet, weet, weeteē*, a marked emphasis being laid on the last. Although extremely loquacious during the early part of spring, it becomes almost silent the moment it has a brood; after which its notes are heard only while the female is sitting on her eggs; for they raise two, sometimes three, broods in a season.

Full of activity and spirit, it flies swiftly after its insect prey, securing the greater part of it on wing. Its flight is low, gliding, and now and then protracted to a considerable distance, as it seldom abandons the pursuit of an insect until it has obtained it.

The nest of this gay bird is always placed low, and is generally attached to the forks of small twigs. It is neatly and compactly formed of mosses, dried grasses, and fibrous roots, and is carefully lined with hair, and not unfrequently a few large feathers. The eggs are from four to six, of a dull white, spotted with reddish-brown towards the larger end. The male and female sit by turns, and show extreme anxiety for the safety of their eggs or young.

My worthy friend JOHN BACHMAN, gave me the following account of the courageous disposition and strength of attachment of the Hooded Flycatcher. "I found a nest of these birds in a low piece of ground, so entangled with smilax and briars that it was difficult for me to pass through it. The nest was not placed more than two feet from the ground. This was in the month of May, and the parents were engaged in feeding the young it contained. Not far from that spot, whilst on a *stand*, waiting for a deer to pass, I saw another pair of the Hooded Flycatcher collecting materials to build a nest. The female was the most active, and yet the male was constantly near to her. A sharp-shinned Hawk suddenly pounced upon them, seized the female, and flew off with her. The male, to my surprise, followed close after the Hawk, flying within a few inches of him, and darting at him in all directions, as if

fully determined to make him drop his prey. The pursuit continued thus until the birds were quite out of my sight!"

This species, like many of its delicate tribe, appears to suffer so much from occasional cold, that, although at all other times a shy and wary bird, when chilly weather surprises it, it becomes at once careless of its safety. On such occasions I have approached them near enough to touch them with my gun. By the middle of September they all retire farther south

Hooded Flycatcher, *Muscicapa cucullata*, Wils. Amer. Orn., vol. iii. p. 101.
Sylvia mitrata, Bonap. Syn., p. 79.
Hooded Warbler, *Sylvia mitrata*, Aud. Orn. Biog., vol. ii. p. 66. Adult Male and Female; vol. v. p. 465.
Selby's Flycatcher, *Muscicapa Selbyii*, Aud. Orn. Biog., vol. i. p. 46. Young.

Third quill longest, second longer than fourth, which slightly exceeds the first; tail slightly emarginate and rounded. Male with the forehead, sides of the head, breast, sides, abdomen, lower wing and tail coverts rich pure yellow; hind head and neck all round black; upper parts yellowish-olive; wings and tail dusky brown, margined with yellowish-olive, an oblique patch of white on the inner webs of the three outer tail-coverts. Female with the forehead, the sides of the head, the throat, and all the lower parts yellow, the hind part of the head dusky, the upper part as in the male. Young similar to the female, but with the tints a little duller.

Male, 5½, 8.

From Texas to Virginia. In the interior, as far as Memphis on the Mississippi. Rather common. Migratory.

THE CANADA FLYCATCHER.

Myiodioctes Canadensis, *Linn.*

PLATE LXXII.—Male and Female.

What a beautiful object, in the delightful season of spring, is our *great laurel*, covered with its tufts of richly, yet delicately, coloured flowers! In imagination I am at this moment rambling along the banks of some murmuring streamlet, overshadowed by the thick foliage of this gorgeous ornament of our mountainous districts. Methinks I see the timid trout eyeing my movements from beneath this rocky covert, while the warblers and other

Canada Flycatcher.

Great Laurel Rhododendron maximum.

1. Male. 2. Female.

Drawn from Nature by J.J. Audubon, F.R.S. F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen, Phila.ª

sylvan choristers, equally fond of their wild retreats, are skipping in all the freedom of nature around me. Delightful moments have been to me those when, seated in such a place, with senses all intent, I gazed on the rosy tints of the flowers that seemed to acquire additional colouring from the golden rays of the sun, as he rode proudly over the towering mountains, drawing aside as it were the sable curtain that till now hung over the landscape, and drying up, with the gentleness of a parent towards his cherished offspring, the dewy tears that glittered on each drooping plant. Would that I could describe to you the thoughts that on such a morning have filled my whole soul; but alas, I have not words wherewith to express the feelings of gratitude, love, and wonder that thrilled and glowed in my bosom! I must therefore content myself with requesting you to look at the blossoms of the laurel as depicted in the plate, together with two of the birds, which, in pairs, side by side, are fond of residing among its glossy and verdant foliage.

A comparison of the plate in which I have represented this interesting species, with the next, (Plate 73,) exhibiting the bird named by me Bonaparte's Flycatcher, will suffice to convince you, good reader, that these birds are truly distinct. My excellent friend Mr. WILLIAM SWAINSON, is quite correct, when, after describing the present species, he says, "we can perceive no character, either in the figure or the description of WILSON, which does not accord with our bird," but is certainly mistaken in supposing me to have informed him that the Canada Flycatcher and that named after the Prince of Musignano are one and the same.

The Myiodioctes Bonapartii was met with in Louisiana, where, during a residence of many years, I never saw the present species. Nay, the Canada Flycatcher, although a migratory, may be said to be truly a northern bird, never having been observed south of Pennsylvania, east of the range of the Alleghany mountains, or below Pittsburgh, on their broad western slope.

I first became acquainted with the habits of the Canada Flycatcher in the Great Pine Forest, while in company with that excellent woodsman JEDIAH IRISH, and I have since ascertained that it gives a decided preference to mountainous places, thickly covered with almost impenetrable undergrowths of tangled shrubbery. I found it breeding in the Pine Forest, and have followed it through Maine, New Brunswick, Nova Scotia, Newfoundland, and the country of Labrador, in every portion of which, suited to its retired habits, it brings forth its broods in peaceful security.

It no doubt comes from the southern parts of America, or from the West Indies, but the mode of its migration is still unknown to me. In Pennsylvania, about the middle of May, a few are seen in the maritime districts, where they seem merely to be resting after the fatigues of a long and tedious journey, before they retreat to their favourite haunts in the mountainous

tracts. There they are heard while concealed among the opening blossoms, giving vent to their mirth in song, perhaps thanking the Author of their being for their safe return to their cherished abode. Their notes are not unmusical, although simple and not attractive. Wherever a streamlet of rushing water, deeply shaded by the great mountain laurel (*Rhododendron maximum*) was met with, there was the Canada Flycatcher to be found. You might see it skipping among the branches, peeping beneath each leaf, examining every chink of the bark, moving along with rapidity and elegance, singing, making love to its mate, and caressing her with all the fervour of a true sylvan lover.

The nest of this bird which I found, was filled to the brim with four young ones ready to take wing; and as it was on the 11th of August, I concluded that the parents had reared another brood that season. When I put my hand on them, they all left the nest and scrambled off, emitting a plaintive *tsche*, which immediately brought the old ones. Notwithstanding all the anxious cares of the latter in assisting them to hide, I procured all of them; but after examining each minutely I set them at liberty. They were of a dull greyish tint above, of a delicate citron colour beneath, and without any spots on the breast or sides. The nest was placed in the fork of a small branch of laurel, not above four feet from the ground, and resembled that of the Black-capped Warbler. The outer parts were formed of several sorts of mosses, supporting a delicate bed of slender grasses, carefully disposed in a circular form, and lined with hair. In another nest found near Eastport, in the State of Maine, on the 22nd of May, five eggs had been laid, and the female was sitting on them. They were of a transparent whiteness, with a few dots of a bright red colour towards the large end. This nest also was placed in the fork of a small bush, and immediately over a rivulet.

The flight of the Canada Flycatcher is rather swifter than that of sylviæ generally is; and as it passes low amid bushes, the bird cannot be followed by the eye to any considerable distance. Now and then it gives chase on the wing, when the clicking of its bill is distinctly heard. By the 1st of October not one remained in the Great Pine Forest, nor did I see any in Labrador after the 1st of August. A few were seen in Newfoundland in the course of that month, and as I returned through Nova Scotia, these birds, like my own party, were all moving southward.

MOTACILLA CANADENSIS, Linn. Syst. Nat., vol. i. p. 27.
CANADA FLYCATCHER, *Muscicapa Canadensis*, Wils. Amer. Orn., vol. iii. p. 100.
SYLVIA PARDALINA, Bonap. Syn., p. 79.
CANADA FLYCATCHER, *Muscicapa Canadensis*, Aud. Orn. Biog., vol. ii. p. 17.

Third quill longest, scarcely exceeding the second, fourth slightly shorter,

Bonapartes Flycatching Warbler

Great Magnolia. Magnolia Grandiflora

Male.

Drawn from Nature by J.J.Audubon, F.R.S.F.L.S.

Lith.d Printed & Col.d by J.T.Bowen, Philad.a

first intermediate between the fourth and fifth; tail rounded. Male with the upper parts ash-grey; the feathers of the wings and tail brown, edged with grey; the head spotted with black; loral space, a band beneath the eye, proceeding down the side of the neck, and a belt of triangular spots across the lower part of the fore neck, black; the lower parts, and a bar from the nostril over the eye, pure yellow; lower wing and tail-coverts white. Female similar to the male, but with the black spots on the neck smaller and fainter. Young similar to the female, with the tints paler, and the neck unspotted.

Male, 5¼, 9.

From Kentucky northward. Not found in the Atlantic districts. Migratory.

The Great Laurel.

Rhododendron maximum, *Willd.*, Sp. Pl., vol. ii. p. 600. *Pursch*, Flor. Amer., vol. i. p. 297.—Decandria Monogynia, *Linn.*—Rhododendra, *Juss.*

This beautiful species frequently attains a height of fifteen or even twenty feet. It is characterized by its oblong, acute leaves, its terminal umbels or clusters of pink campanulate flowers, the divisions of the calyces of which are oval and obtuse. It exhibits several varieties depending on the shape of the leaves, the colour of the flowers, and the comparative length of the stamens and style. The wood, which is tough and stubborn, is well adapted for turner's work. The species is found on all the moist declivities of our mountainous districts, from Carolina to Massachusetts.

BONAPARTE'S FLYCATCHING-WARBLER.

Myiodioctes Bonapartii, *Aud.*

PLATE LXXIII.—Male.

Whilst I have the pleasure of honouring this beautiful new species with the name of so distinguished a naturalist as Charles Lucien Bonaparte, Prince of Musignano, I regret that I am unable to give any account of its habits, or even of its manner of flight, and must therefore confine my remarks upon it within very brief space. The following extract from my journal contains all that I have to say respecting it.

"Monday, August 13, 1821. Louisiana.—On arriving at the Cypress

Swamp (about five miles from St. Francisville) I saw a great number of small birds of different species, and as I looked at them I observed two engaged in a fight or quarrel. I shot at them, but only one fell. On reaching the spot, I found the bird was only wounded, and saw it standing still and upright as if stupified by its fall. When I approached it to pick it up, it spread its tail, opened its wings, and snapped its bill about twenty times sharply and in quick succession, as birds of the genus do when seizing insects on wing. I carried it home, and had the pleasure of drawing it while alive and full of spirit. It often made off from my hand, by starting suddenly, and then would hop round the room as quickly as a Carolina Wren, uttering its *tweet, tweet, tweet* all the while, and snapping its bill every time I took it up. I put it into a cage for a few minutes, but it obstinately thrust its head through the lower parts of the wires. I relieved it from this sort of confinement, and allowed it to go about the room. Next day it was very weak and ruffled up, so I killed it and put it in spirits." To this account I have only to add, that I have not seen another individual since.

BONAPARTE'S FLYCATCHER, *Muscicapa Bonapartii*, Aud. Orn. Biog., vol. i. p. 27.

Bristles longer than in the last, second quill longest; tail very long, nearly even; upper parts light greyish-blue; quills dusky brown, their outer webs greyish-blue, the two outer margined with white; middle tail-feathers and edges of the rest like the back; lower parts and a band on the forehead ochre-yellow, with a few faint dusky spots on the lower part of the fore neck. This species differs from the last chiefly in being of a more elongated form, in having the bristles much longer, the upper parts of a much lighter tint; in wanting the black band down the side of the neck, and the yellow band over the eye; the bill is straighter and more pointed, and the outer primaries are edged with white.

Male, $5\frac{1}{4}$.

Louisiana. Only one specimen ever found.

THE GREAT MAGNOLIA.

MAGNOLIA GRANDIFLORA, *Willd.*, Sp. Pl., vol. ii. p. 1255. *Pursch*, Flor. Amer., vol. ii. p. 380. *Mich.*, Arbr. Forest. de l'Amer. Sept., vol. iii. p. 71. Pl. i.—POLYANDRIA POLYGYNIA, *Linn.*—MAGNOLIÆ, *Juss.*

The magnificent tree, of which a twig, with a cone of ripe fruit, is represented in the plate, attains a height of a hundred feet or even more. The bright red bodies are the seeds, suspended by a filament for some time after the capsules have burst. The trunk is often very straight, from two to four

Kentucky Flycatching Warbler.

Magnolia auriculata.

1. Male 2. Female.

Drawn from Nature by J.J.Audubon, F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Philad.a

feet in diameter at the base, with a greyish smooth bark. The leaves which remain during the winter are stiff and leathery, smooth, elliptical, tapering at the base. The flowers are white, and seven or eight inches in diameter. It is known by the name of *large magnolia*, *big laurel* and *bay-tree*, and occurs abundantly in some parts of Carolina, Georgia, the Floridas and Louisiana.

THE KENTUCKY FLYCATCHING-WARBLER.

MYIODIOCTES FORMOSUS, *Wils.*

PLATE LXXIV.—MALE AND FEMALE.

This beautiful species is the most common and abundant that visits the State of Louisiana and those States situated on the borders of the Mississippi. In Kentucky it is much less common, and in the State of Ohio scarcer still. It is an extremely active and lively bird. It is found in all the low grounds and damp places near water-courses, and generally among the tall rank weeds and low bushes growing in rich alluvial soil. Continually in motion, it is seen hopping in every direction from stalk to stalk, or from one twig to another, preying upon insects and larvæ, or picking small berries, seldom, however, pursuing insects on wing. During spring, its agreeable notes are heard in every quarter. They are emphatic, and resemble the words *tweedle, tweedle, tweedle*, distinctly repeated. This little bird is seen at intervals of a few minutes on the skirts of the tall plants, peeping cunningly to discover whether any intruders may be near; after which it immediately re-enters the thicket, and repeats its little ditty.

I never saw this bird fly farther than a few yards at a time. Its flight is low, and performed in a quick gliding manner, the bird throwing itself into the nearest bush or thicket of tall grass. It arrives in the Southern States, from Mexico, about the middle of March, and remains with us until the middle of September, during which time it rears two broods. Its nest is small, beautifully constructed, and usually attached to several stems of rank weeds. The outer parts are formed of the bark of stalks of the same weeds in a withered state, mixed with a finer kind and some cottony substances. It is beautifully lined with the cottony or silky substance that falls from the cotton-wood tree. The eggs are from four to six, of a pure white colour, finely sprinkled with bright red dots.

This species destroys great numbers of spiders, which it frequently obtains by turning over the withered leaves on the ground. The young males do not attain the full beauty of their plumage until the first spring, and resemble the mother during their stay with us the first season. Young and old associate together, and live in great harmony. I have not seen this species farther eastward than North Carolina.

The branch on which two of these birds are represented, is that of the tree commonly called the white cucumber, a species of magnolia. It flowers as early in the season as the dog-wood. The flowers open before the leaves are expanded, and emit an odour resembling that of a lemon, but soon becoming disagreeable, as the blossom fades. This tree seldom grows to the height of thirty feet, and is consequently disregarded as a timber-tree. I have met with it only in the States of Mississippi and Louisiana, where it grows on the grounds preferred by the Kentucky Warbler during its stay in those States.

KENTUCKY WARBLER, *Sylvia formosa*, Wils. Amer. Orn., vol. iii. p. 85.
SYLVIA FORMOSA, Bonap. Syn., p. 34.
KENTUCKY WARBLER, *Sylvia formosa*, Aud. Orn. Biog., vol. i. p. 196.

Third quill longest, second scarcely shorter, first longer than fourth, the outer three being nearly equal. Tail slightly emarginate and slightly rounded. Male with the upper part of the head and a band from the base of the upper mandible under the eye and down the side of the neck black; a streak from the nostril over the eye, and all the lower parts bright yellow; the upper parts yellowish-olive; wings brown, the feathers margined with yellowish-olive; tail light greenish-brown. Female similar, without the black band on the cheek and neck, and the black of the head less extended.

Male, $5\frac{1}{2}$, 8.

Valley of the Mississippi, and Kentucky. Migratory.

MAGNOLIA AURICULATA, *Willd.*, Sp. Pl., vol. ii. p. 1268. *Pursch.*, Flor. Amer. vol. ii. p. 482. *Mich.*, Arbr. Forest. de l'Amer., Septentr., vol. iii. p. 94. Pl. 7.—POLYANDRIA POLYGYNIA, *Linn.*—MAGNOLIÆ, *Juss.*

This species, which is remarkable for the beauty of its foliage, is known in America by the names of *white cucumber tree*, *long-leaved cucumber tree*, and *Indian physic*. The latter name it has obtained from the circumstance of its bark being used in intermittent fevers. It is characterized by its rhomboido-oboval acute leaves, which are narrowed and two-lobed at the base; and its ovate acute petals. The flowers are greenish-white.

Wilson's Flycatching Warbler.

Snake's Head Chelone Glabra.

1 Male 2. Female

Drawn from Nature by J.J Audubon FRSFLS.

Lith^d Printed & Col^d by J. T. Bowen Phila^a

WILSON'S FLYCATCHING-WARBLER.

MYIODIOCTES WILSONII.—*Bonap.*

PLATE LXXV.—MALE AND FEMALE.

This species passes rapidly through the United States on its way to the Northern Districts, where it breeds and spends the summer. WILSON saw only a few specimens, which he met with in the lower parts of Delaware and New Jersey, and supposed it to be an inhabitant of the Southern States, where, however, it is never found in the summer months. It is not rare in the State of Maine, and becomes more abundant the farther north we proceed. I found it in Labrador and all the intermediate districts. It reaches that country early in June, and returns southward by the middle of August.

It has all the habits of a true Flycatcher, feeding on small insects, which it catches entirely on the wing, snapping its bill with a smart clicking sound. It frequents the borders of the lakes, and such streams as are fringed with low bushes, from which it is seen every moment sallying forth, pursuing its insect prey for many yards at a time, and again throwing itself into its favourite thickets.

The nest is placed on the extremity of a small horizontal branch, amongst the thick foliage of dwarf firs, not more than from three to five feet from the ground, and in the centre of the thickets of these trees so common in Labrador. The materials of which it is composed are bits of dry moss and delicate pine twigs, agglutinated together and to the branches or leaves around it, and beneath which it is suspended, with a lining of extremely fine and transparent fibres. The greatest diameter does not exceed $3\frac{1}{2}$ inches, and the depth is not more than $1\frac{1}{2}$. The eggs are four, dull white, sprinkled with reddish and brown dots towards the larger end, where the markings form a circle, leaving the extremity plain.

The parents show much uneasiness at the approach of any intruder, skipping about and around among the twigs and in the air, snapping their bill, and uttering a plaintive note. They raise only one brood in the season. The young males shew their black cap as soon as they are fully fledged, and before their departure to the south. The head of the young female is at first of the same tint as the back, but I could not ascertain if they acquire their full colour the first autumn.

I found these birds abundant in Newfoundland, but perceived that they had already begun to migrate on the 20th of August; they were moving

from bush to bush, and seldom flew farther than thirty or forty yards at a time; yet when crossing the arms of the Gulf of St. Lawrence, they are obliged to fly forty miles or more without alighting. The little Winter Wren must perform the same task, it being found in the same countries, to which some individuals travel from the United States. I observed the Green Black-capped Flycatcher in considerable numbers, in the northern parts of Maine, in October 1832, and concluded that the individuals seen must have come from a great distance.

GREEN BLACK-CAPT FLYCATCHER, *Muscicapa pusilla*, Wils. Amer. Orn., vol. iii. p. 103.
SYLVIA WILSONII, Bonap. Syn., p. 86.
GREEN BLACK-CAPT WARBLER, Nutt. Man., vol. i. p. 149.
GREEN BLACK-CAPPED FLYCATCHER, *Muscicapa Wilsonii*, Aud. Orn. Biog., vol. ii. p. 148.

Wings short, the second and third quills longest and about equal, the first much shorter than the fourth and a little longer than the fifth; tail even. Back, rump, and upper tail-coverts yellowish-green; crown glossy bluish-black, bordered on the forehead and over the eyes with a broad band of bright yellow, of which colour are all the lower parts; wings and tail dusky brown, the feathers margined with yellowish-green. Female similar to the male, but with the black of the crown of much less extent. Young similar to the female, without black on the head.

Male, $4\frac{1}{2}$, $6\frac{3}{4}$.

From Texas northward, Columbia river, and intervening regions. Not in the Fur Countries. Rather rare. Migratory.

THE SNAKE'S HEAD.

CHELONE GLABRA, *Willd.*, Sp. Pl., vol. iii. p. 225. *Pursch*, Flor. Amer. Sept., vol. ii. p. 427.—DIDYNAMIA ANGIOSPERMIA, *Linn.*—SCROPHULARINÆ, *Juss.*

This plant grows on the banks of rivers and swamps, in the Middle and Southern States. It is herbaceous and perennial, with opposite lanceolate-oblong, acuminate, serrate leaves, and dense terminal spikes of pale red flowers, not remarkable for beauty.

Yellow crowned Wood Warbler.

Iris versicolor

1 Male 2 Young

Drawn from Nature by J.J. Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Phila.a

GENUS II.—SYLVICOLA, *Swains.* WOOD-WARBLER.

Bill short, straight, rather strong, tapering, scarcely broader than high at the base, compressed toward the end; upper mandible with its dorsal outline declinate and nearly straight, the tip slightly declinate, the edges overlapping, with a slight notch; lower mandible with the angle short and rounded, the dorsal line straight, the sides convex, the edges a little inclinate, the tip narrow. Nostrils basal, oval or oblong, partially concealed by the feathers. Head of ordinary size; neck short; body rather slender. Feet of ordinary length, rather slender; tarsus longer than the middle toe, much compressed, covered anteriorly with seven scutella, very sharp behind; toes of moderate length, slender, free, the outer united as far as the second joint, the hind toe proportionally large; claws moderate, well arched, much compressed, laterally grooved, very acute. Plumage soft and blended. Bristles at the base of the upper mandible feeble. Wings rather long, little curved, pointed; the second quill longest, the first and third slightly shorter. Tail rather long, emarginate.

THE YELLOW-CROWNED WOOD-WARBLER.

SYLVICOLA CORONATA, *Lath.*

PLATE LXXVI.—MALE AND FEMALE.

This very abundant species I observed in East Florida, on the 1st of March, 1831, in full summer plumage. In South Carolina, no improvement on its winter dress could be seen on the 18th of the same month. On the 10th of April, many were procured by my friend BACHMAN and myself, in the neighbourhood of Charleston. They were in moult, especially about the head and neck, where the new feathers were still inclosed in their sheath; but so rapidly did the change take place, that, before a few days had elapsed, they were in full plumage.

During a winter spent in the Floridas, I saw these birds daily, and so had abundant opportunity of studying their manners. They were very social among themselves, skipped by day along the piazzas, balanced themselves in the air, opposite the sides of the houses, in search of spiders and insects,

rambled among the low bushes of the gardens, and often dived among the large cabbage-leaves, where they searched for worms and larvæ. At night they roosted on the branches of the orange trees, in the luxuriant groves so abundant in that country. Frequently, in the early part of warm mornings, I saw flocks of them fly off to sea until they were out of sight, and again observed their return to land about an hour after. This circumstance I considered as indicative of their desire to migrate, and as shewing that their journeys are performed by day.

In the beginning of May, I found them so abundant in Maine, that the skirts of the woods seemed alive with them. They appeared to be merely waiting for warmer weather, that they might resume their journey northwards. As we advanced towards Labrador, I observed them at every place where we happened to land. They were plentiful in the Magdeleine Islands; and when we landed on the Labrador coast, they were among the first birds observed by our party.

As Professor MacCulloch of Halifax, Nova Scotia, informed me, few breed in the province of Nova Scotia, nor had his sons, who are active collectors, ever found one of their nests in the vicinity of that town. I am indebted to his liberality for a nest with four eggs, which formed part of his fine collection. Although they are abundant in Labrador, we did not find any of their nests; but we had the good fortune to procure several young birds scarcely able to fly. The nest above mentioned was placed near the extremity of the branch of a low fir-tree, about five feet from the ground. It resembles that of the *Sylvia æstiva* of Latham, being firm, compact, the outer parts formed of silky fibres from different plants attached to the twigs near it by means of glutinous matter, mixed with stripes of the inner bark of some tree unknown to me. Within this is a deep and warm bed of thistle-down, and the inner layer consists of feathers and the fine hair of small quadrupeds. The eggs are rather large, of a light rosy tint, the shell thin and transparent; they are sparingly dotted with reddish-brown near the larger end, but in a circular manner, so that the extremity is unspotted.

This species feeds on insects, is an expert fly catcher, and a great devourer of caterpillars. During winter, however, its principal food consists of berries of various kinds, especially those of the myrtle and pokeweed. They also feed on the seeds of various grasses. When, at this season, a warm day occurs, and the insects are excited to activity, the Warblers are sure to be seen in pursuit of them. The rows of trees about the plantations are full of them, and from the topmost to the lowest branches, they are seen gliding upwards, downwards, and in every direction, in full career after their prey, and seldom missing their aim. At this time of the year, they emit, at every movement, a single *tweet*, so very different from that of any other Warbler,

that one can instantly recognise the species by it among a dozen. They rarely enter the woodlands, but prefer the neighbourhood of cultivated or old fields, the nurseries, gardens, and trees about towns, villages, or farm-houses, or by the sides of roads. They are careless of man, allowing him to approach within a few yards, or even feet, without manifesting much alarm. As they breed so far north, it is probable that they raise only one brood in the season. They return south early in September, already clad in their winter dress.

YELLOW-RUMP WARBLER, *Sylvia coronata*, Wils. Amer. Orn., vol. ii. p. 138.
SYLVIA CORONATA, Bonap. Syn., p. 78.
YELLOW-CROWNED WARBLER, or MYRTLE BIRD, *Sylvia coronata*, Nutt. Man., vol. i. p. 361.
YELLOW-RUMP WARBLER, *Sylvia coronata*, Aud. Orn. Biog., vol. ii. p. 303.

Second quill longest, third scarcely shorter, first longer than fourth; tail slightly emarginate. Male with the upper parts deep ash-grey, streaked with black; crown, rump, and a patch on the sides of the body, rich yellow: secondary coverts, and first row of small coverts tipped with white, which forms two bars on the wing; quills dark brown, margined with light greyish-brown; tail feathers brownish-black, margined with ash-grey, the outer three on each side with a white patch on the inner web near the end; a slender white line over the eye; feathers of the eyelids white; lore and cheek black; throat white; lower neck, fore part of breast and sides variegated with black, the tips of the feathers being white; the rest of the lower parts white. Female without the yellow spot on the crown, although the feathers there are tinged with that colour at the base; the upper parts tinged with light brown, the yellow spots on the sides and rump paler.

Male, $5\frac{1}{4}$, $8\frac{1}{2}$.

From Texas northward, and throughout the interior. Extremely common. Migratory.

IRIS VERSICOLOR.

IRIS VERSICOLOR, *Willd.*, Sp. Pl., vol. i. p. 233. *Pursch*, Fl. Amer. Sept., vol. i. p. 29.—TRIANDRIA MONOGYNIA, *Linn.*—IRIDES, *Juss.*

Beardless; the stem round, flexuous, equal in height to the leaves, which are ensiform; the stigmas equalling the inner petals; capsules ovate, with their angles obtuse. This *iris* is extremely common in all the swampy parts of the Southern States, and extends far up along the Mississippi. In many places I have seen beds of a quarter of an acre. It is cultivated here and there in gardens.

AUDUBON'S WOOD-WARBLER.

SYLVICOLA AUDUBONII, *Townsend.*

PLATE LXXVII.—MALE AND FEMALE.

This species, so very intimately allied to *Sylvia coronata,* that an observer might readily mistake the one for the other, was discovered by Mr. TOWNSEND, who has done me the honour of naming it after me. He states, that "the Chinook Indians know it by the name of '*Fout-sah,*' and that it is very numerous about the Columbia river, arriving there in the middle of March, and remaining to breed, but disappearing in the end of June. In the beginning of October it is again seen, with its plumage renewed. Its voice so nearly resembles that of the Chestnut-sided Warbler as to render it difficult to distinguish them. It keeps in the most impervious thickets, and is always silent when engaged in seeking its food." Mr. NUTTALL has favoured me with the following animated account of it.

"This elegant species, one of the beautiful and ever-welcome harbingers of approaching summer, we found about the middle of April, accompanying its kindred troop of Warblers, enlivening the dark and dreary wilds of the Oregon.' The leaves of the few deciduous trees were now opening rapidly to the balmy influence of the advancing spring, and flowers but rarely seen even by the botanist, sent forth their delicious fragrance, and robed in beauty the shady forests and grassy savannahs. But nothing contributes so much life to the scene as the arrival of those seraphic birds, the Thrushes and Warblers, which, uniting in one wild and ecstatic chorus of delight, seemed to portray, however transiently, the real rather than the imaginary pleasures of paradise. Nor in those sad and distant wilds were the notes of the gilded messenger of summer (*Sylvia æstiva*) the less agreeable that I had heard them a thousand times before. The harmonies of Nature are not made to tire, but to refresh the best feelings of the mind, to recall the past, and make us dwell with delight upon that which best deserves our recollection. But what was my surprise to hear the accustomed note of the Summer Yellow-bird delivered in an improved state by this new Warbler, clad in a robe so different but yet so beautiful. Like that species, also he was destined to become our summer acquaintance, breeding and rearing his offspring in the shady firs by the borders of the prairie openings, where he could at all times easily obtain a supply of insects or their larvæ. On the 8th of June the

Audubon's Wood-Warbler.

Strawberry Tree Euonymus Americanus.

1 Male 2 Female.

Drawn from Nature by J.J. Audubon, FRSELS. Lith.d Printed & Col.d by J.T. Bowen Phila.a

young of this species, at that time so much like those of the Yellow-Rump, were already out in small roving and busy flocks, solicitously attended and occasionally fed by the still watchful parents. We may notice in this species as a habit, that, unlike many other birds of its tribe, it occasionally frequents trees, particularly the water-oaks and the lower branches of those gigantic firs, which attain not uncommonly a height of 240 feet. In the branches of the latter, near a cliff, opening on a prairie by the banks of the river Columbia, I have reason to believe that a pair of this fine species had a nest, as great solicitude was expressed when I several times accidentally approached the place."

I have given figures of the male and female, taken from specimens obtained by Mr. TOWNSEND on the Columbia.

SYLVIA AUDUBONII, AUDUBON'S WARBLER, Townsend, Journ. Acad. Nat. Sc. Philadelphia, vol. vii. p. 190.
AUDUBON'S WARBLER, *Sylvia Audubonii*, Aud. Orn. Biog., vol. v. p. 52.

Outer four quills nearly equal, second longest; tail slightly emarginate. Male with the upper parts bluish ash-grey, streaked with black; crown, rump, upper part of throat, and a patch on the sides of the body, rich yellow; first row of small coverts largely tipped, and secondary coverts broadly margined and tipped with white, which thus forms a conspicuous patch on the wing; quills and tail brownish-black, narrowly margined with greyish-white; a patch of white on the inner webs of all the tail-feathers, but on the central reduced to a mere edging; a small white spot on each of the eyelids; loral space and cheek black; lower part of neck anteriorly, fore part of breast, and sides, variegated with black and white or ash-grey, the latter colours margining the feathers; the rest of the lower parts white. Female without the yellow spot on the crown, although the feathers there are tinged with that colour at the base; upper parts light brownish-grey, streaked with dusky; lower parts whitish, tinged with brown, and streaked with dusky; throat and rump yellow, but of a lighter tint than in the male, and but slight indications of the yellow patch on the sides; there is much less white on the wings, and the white patches on the tail-feathers are of less extent.

In size, form, and proportion, this species and *Sylvicola coronata* are almost precisely similar; and their colours are almost exactly alike, the only remarkable difference in this respect being, that the throat of the present species is yellow, while that of the former is white.

Male, $5\frac{3}{4}$, wing, $3\frac{1}{12}$.

Columbia river, northward. Common. Migratory.

THE STRAWBERRY TREE.

EUONYMUS AMERICANUS, *Willd.*, Sp. Pl., vol. i. p. 1132. *Pursch*, Fl. Amer., vol. i. p. 168.

This beautiful shrub, which attains a height of five or six feet, is common in most parts of the United States, growing in low or swampy ground, and in shady places, is characterized by having the branches quadrangular, the leaves subsessile, elliptico-lanceolate, acute, and serrate. The fruit is large, round, tuberculate, of a scarlet colour, and very ornamental.

THE BLACK-POLL WOOD-WARBLER.

SYLVICOLA STRIATA, *Lath.*

PLATE LXXVIII.—MALE AND FEMALE.

No sooner had the Ripley come to an anchor in the curious harbour of Labrador, known by the name of Little Macatina, than my party and myself sought the shore;—but before I proceed, let me describe this singular place. It was the middle of July, the weather was mild and pleasant, our vessel made her way under a smart breeze through a very narrow passage, beyond which we found ourselves in a small circular basin of water, having an extent of seven or eight acres. It was so surrounded by high, abrupt, and rugged rocks, that, as I glanced around, I could find no apter comparison for our situation than that of a nut-shell in the bottom of a basin. The dark shadows that overspread the waters, and the mournful silence of the surrounding desert, sombred our otherwise glad feelings into a state of awe. The scenery was grand and melancholy. On one side, hung over our heads, in stupendous masses, a rock several hundred feet high, the fissures of which might to some have looked like the mouths of some huge undefined monster. Here and there a few dwarf-pines were stuck as if by magic to this enormous mass of granite; in a gap of the cliff the brood of a pair of grim Ravens shrunk from our sight, and the Gulls, one after another, began to wend their way overhead towards the middle of the quiet pool, as the furling of the sails was accompanied by the glad cries of the sailors. The remarkable land-beacons erected in that country to guide vessels into the harbour, looked like so many figures of gigantic stature formed from the large blocks that lay on every hill around. A low valley, in which meandered a rivulet, opened at a distance

Black-poll Wood Warbler.

Black Gum Tree Nyssa aquatica

1. Males 2. Female

Drawn from Nature by J.J.Audubon, FRS.FLS. Lith.ª Printed & Col.ª by J. T. Bowen Phila.ª

to the view. The remains of a deserted camp of seal-catchers was easily traced from our deck, and as easily could we perceive the innate tendency of man to mischief, in the charred and crumbling ruins of the dwarf-pine forests. But the harbour was so safe and commodious, that, before we left it to find shelter in another, we had cause to be thankful for its friendly protection.

We were accoutred for the occasion, and, as I have said, instantly made for the shore. Anxious to receive as much information as possible in a given time, we separated. The more active scaled the most difficult heights, and among them was our Captain, Mr. EMERY, than whom a more expert seaman and a better man is rarely to be found. Others chose the next most difficult place of ascent; while I and my young friend Dr. SHATTUCK of Boston, slowly moved along in quest of birds, plants, and other objects. We soon reached a considerable elevation, from which we beheld the broad Gulf of St. Lawrence gathering its gray vapours, as if about to cover itself with a mantle; while now and then our eye was suddenly attracted by the gliding movements of our distant parties, as they slipped down the declivities. In this manner we had surveyed the country for several miles, when the sea-fog began to approach the land so swiftly, that, with the knowledge we all had acquired of the difficulty of proceeding overland when surprised by it, we judged it prudent to return to our vessel. There we compared notes, and made preparations for the morrow.

One fair morning, while several of us were scrambling through one of the thickets of trees, scarcely waist-high, my youngest son chanced to scare from her nest a female of the Black-poll Warbler. Reader, just fancy how this raised my spirits. I felt as if the enormous expense of our voyage had been refunded. "There," said I, "we are the first white men who have seen such a nest." I peeped into it, saw that it contained four eggs, and observed its little owner looking upon us with anxiety and astonishment. It was placed about three feet from the ground, in the fork of a small branch, close to the main stem of a fir tree. Its diameter internally was two inches, the depth one and a half. Externally it resembled the nest of the White-crowned Sparrow, being formed of green and white moss and lichens, intermixed with coarse dried grass; within this was a layer of bent grass, and the lining was of very dark coloured dry moss, looking precisely like horse-hair, arranged in a circular direction with great care. Lastly, there was a thick bed of large soft feathers, some of which were from Ducks, but most of them from the Willow Grouse.

I must now return to the United States, and trace the progress of our Warbler. It enters Louisiana as early as the middle of February. At this time it is seen gleaning food among the taller branches of the willows, maples, and other trees that overhang the rivers and lakes. Its migrations eastward

follow the advance of the season, and I have not been able to comprehend why it is never seen in the maritime parts of South Carolina, while it is abundantly found in the State of New Jersey close to the sea-shore. There you would think that it had changed its habits; for, instead of skipping among the taller branches of trees, it is seen moving along the trunks and large limbs, almost in the manner of a Certhia, searching the chinks of the bark for larvæ and pupæ. They are met with in groups of ten, twelve, or more, in the end of April, but after that period few are to be seen. In Massachusetts they begin to appear nearly a month later, the intervening time being no doubt spent on their passage through New York and Connecticut. I found them at the end of May in the eastern part of Maine, and met with them wherever we landed on our voyage to Labrador, where they arrive from the 1st to the 10th of June, throwing themselves into every valley covered by those thickets, which they prefer for their breeding places. It also breeds abundantly in Newfoundland.

In these countries it has almost become a Flycatcher. You see it darting in all directions after insects, chasing them on wing, and not unfrequently snapping so as to emit the clicking sound characteristic of the true Flycatcher. Its activity is pleasing, but its notes have no title to be called a song. They are shrill, and resemble the noise made by striking two small pebbles together, more than any other sound that I know. They may be in some degree imitated by pronouncing the syllable *sche, sche, sche, sche, sche,* so as progressively to increase the emphasis.

I found the young fully grown in the latter part of August, but with the head as in the females, and like them they obtain their full plumage during the next spring migration, after which these birds return southward. They raise only one brood in the season, and if any of them breed in the United States, it must be in the northern parts. They are seldom seen in autumn in the States, and very seldom during the summer months.

The Black-poll Warbler is a gentle bird, by no means afraid of man, although it pursues some of its smaller enemies with considerable courage. The sight of a Canadian Jay excites it greatly, as that marauder often sucks its eggs, or swallows its young. In a few instances I have seen the Jay confounded by the temerity of its puny assailant.

The occurrence of this species so far north in the breeding season, and the curious diversity of its habits in different parts of the vast extent of country which it traverses, are to me quite surprising, and lead me to add some remarks on the migration of various species of Sylvia, which, like the present, seem to skip, as it were, over large portions of the country.

In the course of my voyages to the south-eastern extremity of the Peninsula of the Floridas, I frequently observed birds of many kinds flying either

high or low over the sea. Of these the greater number were, like the present species, Sylviæ which are never found in Georgia or the two Carolinas. Their course was a direct one, and such as led me to believe that the little voyagers were bound for Cape Hatteras. The meeting with many of the species to which I allude, along the shores of Maryland, New Jersey, the eastern coast of Long Island, &c., and all along to the Bay of Fundy, has strengthened the idea; but as I may not be correct, I leave the matter to the determination of more experienced observers. The subject appears to me to be one of the greatest importance, for the occurrence of plants in certain parts of a country and not in others may possibly be caused by the absence, during migration, of such birds as move by "short cuts" from one point of land to another.

BLACK-POLL WARBLER, *Sylvia striata*, Wils. Amer. Orn., vol. iv. p. 40.
SYLVIA STRIATA, Bonap. Syn., p. 81.
SYLVICOLA STRIATA, *Black-poll Warbler*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 218.
BLACK-POLL WARBLER, *Sylvia striata*, Nutt. Man., vol. i. p. 383.
BLACK-POLL WARBLER, *Sylvia striata*, Aud. Orn. Biog., vol. ii. p. 201.

First and second quills equal and longest, third a little shorter; tail emarginate. Male with the upper parts bluish ash-grey, streaked with black; the upper part of the head deep black; the secondary coverts and first row of small coverts largely tipped with white; quills and tail-feathers blackish-brown; primaries narrowly edged with greenish-yellow, secondaries broadly with white; three outer tail-feathers with a patch of white on the inner web at the end; cheeks and lower parts white; a band of black spots from the base of the lower mandible down the side of the neck and body. Female with the upper parts oil-green, streaked with black; the rump and upper tail-coverts plain and edged with grey; white wing-bands tinged with yellow; cheeks yellowish-grey, mottled with dusky, lower parts dull white, tinged with yellow and reddish, the sides of the neck and body with fainter dark streaks. Young like the female.

Male 5¼, 8½.

From Texas to Labrador, where it breeds. Columbia river. Common. Migratory.

THE BLACK GUM TREE.

NYSSA AQUATICA, *Linn.*, Sp. Pl., 1511. *Mich.*, Arbr. Forest, vol. ii. p. 265, pl. 22.—N. BIFLORA, *Willd.*, Sp. Pl., vol. iv. p. 1113. *Pursch*, Flor. Amer., vol. i. p. 177.—POLYGAMIA MONŒCIA, *Linn.*—ELÆAGNI, *Juss.*

The Black Gum is seldom found of a greater height than from fifty to sixty feet, with a diameter of about three. The wood is of little use, even for firing, as it takes a long time to consume, affords no blaze, and burns dismally. A trunk of this tree falling into the water immediately sinks and remains. Its foliage is pleasing to the eye, and in many parts of the Middle Districts some are kept standing as shade-trees for cattle. The berries, which hang in pairs, and sometimes three or four together, at the extremity of their slender peduncle, are eaten in great quantities during winter by various species of birds.

THE YELLOW-THROATED WOOD-WARBLER.

SYLVICOLA PENSILIS, *Latham.*

PLATE LXXIX.—Male.

This beautiful bird absents itself from the State of Louisiana only for two months in the year, December and January. When they return in the beginning of February, they throw themselves by thousands into all the cypress woods and cane-brakes, where they are heard singing from the first of March until late in autumn, sometimes in November.

Their habits are very different from those of the Warblers, and are more in general accordance with those of the Certhiæ. They move up and down, sidewise and spirally, along the trunks, branches, and even twigs of the tallest and largest cypresses, or such other trees as are found intermingled with them. They are extremely active, in fact, fully as much so as the little Brown Creeper itself. Like it, they suddenly leave the uppermost branches or higher parts of the trunks, and diving downwards alight on the roots, and renew their search after small insects and larvæ. I never saw any of them pursue insects on wing.

The nest of this species is prettily constructed. Its outer parts are composed of grey lichens and soft mosses, the interior of silky substances and a few fibres of the Spanish moss. The female lays four pure white eggs, having two or three purple dots near the larger end. I think they raise two broods during their stay in Louisiana, but cannot speak of this as certain. The nest is placed on a horizontal branch of a cypress, twenty, thirty, or even fifty feet above the ground, and is with difficulty discovered from below, as it resembles a knot or a tuft of moss.

Yellow-throated Wood Warbler.

Chinquapin Castanea pumila?

Male.

Drawn from Nature by J.J.Audubon, F.R.S. F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Philad.a

The song of the Yellow-throated Warbler would please you, kind reader. Of this I have not a doubt, as it is soft and loud, and is continued for two or three minutes at a time, not unlike that of the Painted Finch, or Indigo-bird. As it is heard in all parts of our most dismal cypress swamps, it contributes to soothe the mind of a person whose occupation may lead him to such places. I never saw this species on the ground. The male and the female are nearly alike in plumage, but the young birds, which hunt for insects in company, in the manner of Creepers or Titmice, do not acquire the yellow on the throat, nor the full brilliancy of their plumage, until the first spring.

These birds confine themselves to the Southern States, seldom moving farther towards the Middle Districts than North Carolina. They do not even ascend the Mississippi farther than the Walnut Hills. They are abundant in the neighbourhood of the Red river, and probably do not go farther south than Mexico, during their short absence from the United States.

Happening to shoot several of these birds on a large chinquapin tree, growing on the edge of a hill close to a swamp, I have put a male on one of its twigs, which is furnished with a few fruits quite ripe and ready to leave their husks. In the Southern States this tree is rare. It generally prefers elevated places, and rocky declivities, with an arid soil. The wood resembles that of the chestnut, but the trees being generally small, little use is made of it as timber. The fruit is eaten by children. This tree is abundant along the greater part of the range of the Alleghanies and its branches.

YELLOW-THROATED WARBLER, *Sylvia flavicollis*, Wils. Amer. Orn., vol. ii. p. 64.
SYLVIA PENSILIS, Bonap. Syn., p. 79.
YELLOW-THROATED WARBLER, *Sylvia pensilis*, Aud. Orn. Biog., vol. i. p. 434.

Outer three quills almost equal, second quill longest, fourth shorter than first; tail slightly emarginate. Male with the upper parts light greyish-blue; the forehead black, the crown spotted with the same; a white line over the eye; secondary coverts and first row of small coverts largely tipped with white; quills greyish-black, margined with light greyish-blue; tail-feathers of the same colour, the outer three with a patch of white on the inner web at the end; loral space, a band under the eye, ear-coverts, a band down the side of the neck, and numerous oblong spots on the sides of the body, black; throat bright yellow; rest of lower parts white. Female similar, but with the tints paler.

Male, 5½, 8½.

From Texas to New Jersey. In the interior along the Mississippi to Natchez. Common. Migratory.

THE CHINQUAPIN.

CASTANEA PUMILA, *Willd.*, Sp. Pl., vol. iv. p. 461. *Pursch*, Flor. Amer., vol. ii. p. 625. *Mich.*, Arbr. Forest. de l'Amer. Sept., vol. ii. p. 166. Pl. 7.—MONŒCIA POLYANDRIA, *Linn.*—AMENTACEÆ, *Juss.*

This species of chestnut is characterized by its oblong, acute, sharply serrated leaves, which are whitish and downy beneath. The fruit is very agreeable, and is a favourite food of squirrels, and birds of different species, such as Pigeons, Jays, Turkeys and Woodpeckers.

THE BAY-BREASTED WOOD-WARBLER.

SYLVICOLA CASTANEA, *Wils.*

PLATE LXXX.—MALE AND FEMALE.

This species does not breed in the United States, or if it does, must spend the summer in some of the most remote north-western districts, so that I have not been able to discover its principal abode. It merely passes through the better known portions of the Union, where it remains for a very short time. There is something so very uncommon in its appearance in different States, that I cannot refrain from briefly mentioning it. It is sometimes found in Pennsylvania, or the State of New York, as well as in New Jersey, as early as the beginning of April, but is only seen there for a few days. I have shot some individuals at such times, when I observed them employed in searching for insects and larvæ along the fences bordering our fields. At other times I have shot them late in June, in the State of Louisiana, when the cotton-plant was covered with blossoms, amongst which they were busily searching for food. The Bay-breasted Warbler, however, has so far eluded my inquiries, that I am unable to give any further account of its habits.

BAY-BREASTED WARBLER, *Sylvia castanea*, Wils. Amer. Orn., vol. ii. p. 97.
SYLVIA CASTANEA, Bonap. Syn., p. 80.
BAY-BREASTED WARBLER, *Sylvia castanea*, Nutt. Man., vol. i. p. 382.
BAY-BREASTED WARBLER, *Sylvia castanea*, Aud. Orn. Biog., vol. i. p. 358.

Outer three quills almost equal, fourth considerably shorter; tail slightly

Bay-Breasted Wood Warbler.

Highland Cotton-plant. Gossipium herbaceum.

1. Male 2. Female

Drawn from Nature by J.J.Audubon.F.R.S.F.L.S.

Lith.d Printed & Col.d by J. T. Bowen, Phila.a

Chesnut sided Wood Warbler.

Moth Mullein. Verbascum Blattaria?

1. Male. 2. Female.

Drawn from Nature by J.J. Audubon, F.R.S.F.L.S.

Lith.d Printed & Col.d by J. T. Bowen, Philad.a

emarginate. Male with the upper part of the head, the fore-neck, and the sides, chestnut-read; forehead and cheeks, including a small space over the eye, deep black, behind which is a transverse patch of yellowish-white on the sides of the neck; back bluish ash-grey, streaked with black; tips of the secondary coverts and first row of small coverts white; quills and tail-feathers brownish-black, edged with grey, the outer three of the latter with a white patch on the inner web, near the end; middle of breast, abdomen, and lower tail-coverts white, tinged with reddish. Female similar to the male, but with the tints fainter, especially the chestnut of the head and throat, which are converted into light brownish-red.

Male, $5\frac{1}{4}$, 11.

From Texas northward. Rather common. Migratory.

The Highland Cotton-plant.

Gossipium herbaceum, *Linn.*, Syst. Nat., vol. ii. p. 462.—Monadelphia polyandria, *Linn.*—Malvaceæ, *Juss.*

This species, commonly known in America, is distinguished by its five-lobed leaves and herbaceous stem.

THE CHESTNUT-SIDED WOOD-WARBLER.

Sylvicola icterocephala, *Lath.*

PLATE LXXXI.—Male and Female.

In the beginning of May 1808, I shot five of these birds, on a very cold morning, near Pottsgrove, in the State of Pennsylvania. There was a slight fall of snow at the time, although the peach and apple trees were already in full bloom. I have never met with a single individual of this species since. They all had their wings drooping, as if suffering severely from the sudden change of the weather, and had betaken themselves to the lower rails of a fence, where they were engaged in searching after insects, particularly spiders. I procured every one of those which I met with that morning, and which were five in number, two of them males, and the rest females.

Where this species goes to breed I am unable to say, for to my inquiries on this subject I never received any answers which might have led me to the

districts resorted to by it. I can only suppose, that if it is at all plentiful in any portion of the United States, it must be far to the northward, as I ransacked the borders of Lake Ontario, and those of Lakes Erie and Michigan, without meeting with it. I do not know of any naturalist who has been more fortunate, otherwise I should here quote his observations.

The females had the ovaries furnished with numerous eggs, about the size of the head of a common pin. The stomach of all the birds which I killed contained some grass seeds of the preceding year, and a few small black spiders; but the birds appeared half starved. Having procured them near the ground, I have placed them on a plant which grows about the fields, and flowers in the beginning of May.

CHESTNUT-SIDED WARBLER, *Sylvia icterocephala*, Wils. Amer. Orn., vol. i. p. 99.
SYLVIA ICTEROCEPHALA, Bonap. Syn., p. 80.
CHESTNUT-SIDED WARBLER, *Sylvia icterocephala*, Nutt. Man., vol. i. p. 380.
CHESTNUT-SIDED WARBLER, *Sylvia icterocephala*, Aud. Orn. Biog., vol. i. p. 306.

Outer three quills nearly equal, second slightly longer; tail slightly emarginate. Male with the upper part of the head light yellow, a small part of the forehead white; loral space and two bands proceeding from it, one over and behind the eye, the other downwards, black; upper parts bluish ash-grey, tinged behind with greenish-yellow, and streaked with black; secondary coverts and first row of small coverts largely tipped with pale yellow; quills and tail-feathers brownish-black, primaries edged with greyish-white, secondaries with yellowish-green; outer three tail-feathers on each side with a white patch on the inner web at the end; lower parts white, sides of the neck and body deep chestnut. Female similar, but with the chestnut on the sides less extended, and the yellow on the head tinged with green.

Male, $5\frac{1}{4}$, 8.

From Texas northward. Rather common. Migratory.

THE MOTH MULLEIN.

VERBASCUM BLATTARIA, *Willd.*, Sp. Pl., vol. i. p. 1005. *Pursch*, Flor. Amer., vol. i. p. 142. *Smith.*, Engl. Flor., vol. i. p. 513.—PENTANDRIA MONOGYNIA, *Linn.*—SOLANEÆ, *Juss.*

A biennial plant, distinguished from the other species of the same genus by its amplexicaul ovato-oblong, rugose, serrated, glabrous leaves, and one-flowered solitary pedicels. The ordinary colour of the flowers is yellow, but the plant represented is of a variety with larger whitish or pale rose-coloured flowers. It grows in fields and bye-roads, and is of common occurrence.

Pine creeping Wood-Warbler

Yellow Pine Pinus variabilis

1. Male 2. Female

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.d Printed & Col.d by J.T.Bowen, Phila.a

THE PINE CREEPING WOOD-WARBLER.

SYLVICOLA PINUS, *Lath.*

PLATE LXXXII.—MALE AND FEMALE.

The Pine Creeping Wood-Warbler, the most abundant of its tribe, is met with from Louisiana to Maine; more profusely in the warmer, and more sparingly in the colder regions, breeding wherever fir or pine trees are to be found. Although it may occasionally be seen on other trees, yet it always prefers those of that remarkable and interesting tribe. I found it on the sandy barrens bordering St. John's river, in East Florida, in full song, early in February. I am pretty certain that they had already formed nests at that early period, and it seems to me not unlikely that this species, as well as some others that breed in that country at the same time, may afterwards travel far to the eastward, and there rear another brood the same year.

In some degree allied to the Certhiæ in its habits, it is often seen ascending the trunks and larger branches of trees, hopping against the bark, in search of the larvæ that lurk there. At times it moves sidewise along a branch three or four steps, and turning about, goes on in the same manner, until it has reached a twig, which it immediately examines. Its restless activity is quite surprising: now it gives chase to an insect on wing; now, it is observed spying out those more diminutive species concealed among the blossoms and leaves of the pines; again, it leaves the topmost branches of a tree, flies downwards, and alights sidewise on the trunk of another, which it ascends, changing its position, from right to left, at every remove. It also visits the ground in quest of food, and occasionally betakes itself to the water, to drink or bathe.

It is seldom that an individual is seen by itself going through its course of action, for a kind of sympathy seems to exist in a flock, and in autumn and winter especially, thirty or more may be observed, if not on the same tree, at least not far from each other. Although it feeds on insects, larvæ, and occasionally small crickets, it seems to give a decided preference to a little red insect of the coleopterous order, which is found enclosed in the leaves or stipules of the pine. Low lands seem to suit it best, for it is much less numerous in mountainous countries than in those bordering the sea.

Like many other birds, the Pine Creeping Warbler constructs its nest of different materials, nay even makes it of a different form, in the Southern

and Eastern States. In the Carolinas, for instance, it is usually placed among the dangling fibres of the Spanish moss, with less workmanship and less care than in the Jerseys, the State of New York, or that of Maine. In the latter, as well as in Massachusetts, where it breeds about the middle of June, it places its nest at a great height, sometimes fifty feet, attaching it to the twigs of a forked branch. Here the nest is small, thin but compact, composed of the slender stems of dried grasses mixed with coarse fibrous roots and the exuviæ of caterpillars or other insects, and lined with the hair of the deer, moose, racoon, or other animals, delicate fibrous roots, wool, and feathers. The eggs, which are from four to six, have a very light sea-green tint, all over sprinkled with small pale reddish-brown dots, of which there is a thicker circle near the larger end. In these districts, it seldom breeds more than once in the season, whereas in the Carolinas, Georgia, and the Floridas, where it is a constant resident, it usually has two, sometimes three, broods in the year, and its eggs are deposited on the first days of April, fully a month earlier than in the State above mentioned.

Its flight is short, and exhibits undulating curves of considerable elegance. It migrates entirely by day, flying from tree to tree, and seldom making a longer flight than is necessary for crossing a river. The song is monotonous, consisting at times merely of a continued tremulous sound, which may be represented by the letters *trr-rr-rr-rr*. During the love season, this is changed into a more distinct sound, resembling *twē, twē, tē, tē, tē, tēē*. It sings at all hours of the day, even in the heat of summer noon, when the woodland songsters are usually silent.

It is a hardy bird, seldom abandoning the most northern of the Eastern States until the middle of October. I saw none beyond the Province of New Brunswick, and Professor MacCulloch of Pictou had not observed it in Nova Scotia. In Newfoundland and Labrador I did not see a single individual.

I have placed a pair of these birds on a branch of their favourite pine; but the colouring of the male is not so brilliant as it is in spring and summer, the individual represented having been drawn in Louisiana in the winter, where, as well as in the Carolinas, the Floridas, and all the Southern Districts, it is a constant resident.

I have already mentioned that the Pine Creeping Warbler is the parent of Vigors's Warbler. Of this fact I gave intimation to the Prince of Musignano, during his recent visit to London. I found it abundant in the Texas, where it breeds.

Pine Creeping Warbler, *Sylvia pinus*, Wils. Amer. Orn., vol. iii. p. 25.
Sylvia pinus, Bonap. Syn., p. 81.

PINE WARBLER, *Sylvia pinus*, Nutt. Man., vol. i. p. 387.
PINE CREEPING WARBLER, *Sylvia pinus*, Aud. Orn. Biog., vol. ii. p. 232.
VIGORS'S WARBLER, *Sylvia Vigorsii*, Aud. Orn. Biog., vol. i. p. 153. Young.

Wings of moderate length, with the outer three quills almost equal, the first and second longest; tail emarginate. Male with the upper parts light yellowish-green, inclining to olive, the rump brighter; a streak over the eye, the eyelids, throat, breast, and sides, bright yellow, with a greenish tinge, the rest of the lower parts white; wings and tail blackish-brown; secondary coverts and first row of small coverts largely tipped with dull white; primaries edged with whitish, secondaries with brownish-grey; outer two tail-feathers with a patch of white on the inner web, near the end. Female with the upper parts yellowish-brown, tinged with grey, the lower parts of paler and duller tints than in the male. Young similar to the female.

Male, 5, 8.

From Texas to Maine. Very abundant. Resident in the Southern and Middle States.

THE YELLOW PINE.

PINUS VARIABILIS, *Pursch*, Flor. Amer. Sept., vol. ii. p. 643.—P. MITIS, *Michaux*, Arbr. Forest., vol. i. p. 52. pl. 3.—MONŒCIA MONADELPHIA, *Linn.*—CONIFERÆ, *Juss.*

This species is known by various names:—*Long-leaved pine, yellow pine, red pine,* and *pitch pine.* It attains a height of a hundred feet, and has a diameter of four. The leaves are very long; three in a sheath, and fasciculate at the ends of the branches. It is very abundant in the Southern States, where it is employed for various purposes, more especially for the enclosure of cultivated fields, and for ship-building and domestic architecture. Most of the tar of the Southern States is obtained from this tree.

THE HEMLOCK WARBLER.

SYLVICOLA PARUS, *Wils.*

PLATE LXXXIII.—MALE AND FEMALE.

It is to the persevering industry of WILSON that we are indebted for the discovery of this bird. He has briefly described the male, of which he had obtained but a single specimen. Never having met with it until I visited the Great Pine Forest, where that ardent ornithologist found it, I followed his track in my rambles there, and had not spent a week among the gigantic hemlocks which ornament that interesting part of our country, before I procured upwards of twenty specimens. I had therefore a fair opportunity of observing its habits, which I shall now attempt to describe.

The tallest of the hemlock pines are the favourite haunts of this species. It appears first among the highest branches early in May, breeds there, and departs in the beginning of September. Like the Blue Yellow-back Warbler, its station is ever amidst the thickest foliage of the trees, and with as much agility as its diminutive relative, it seeks its food by ascending from one branch to another, examining most carefully the under parts of each leaf as it proceeds. Every insect that escapes is followed on wing, and quickly secured. It now and then, as if for variety or sport, makes a downward flight, alights on a smaller tree, surveys it for awhile, and again ascends to a higher station. During the early part of autumn it frequents, with its young, the margins of rivulets, where insects are then more abundant.

Its notes are sweet and mellow, and although not numerous, are easily distinguished from those of any other Warbler. Like a true Sylvia, it is often seen hanging at the end of a branch, searching for insects. It never alights on the trunk of a tree, and in this particular differs from every other species of its genus. Its food is altogether of insects.

To the inimitable skill of the worthy JEDIAH IRISH in the use of the rifle, I am indebted for the possession of a nest of this bird. On discovering one of the birds, we together watched it for hours, and at last had the good fortune to see itself and its mate repeatedly enter a thick cluster of leaves, where we concluded their nest must be placed. The huntsman's gun was silently raised to his shoulder, the explosion followed in course, and as I saw the twig whirling downwards, I experienced all the enthusiastic anxiety ever present with me on such occasions. Picking up the branch, I found in it a nest,

Hemlock Warbler.

Dwarf Maple Acer Spicatum.

1. Male 2. Female.

Drawn from Nature by J.J.Audubon, FRSFLS.

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containing three naked young, with as yet sealed eyelids. The nest was small, compact, somewhat resembling that of the American Goldfinch. It was firmly attached to the leaves of the hemlock twig, which appeared as if intentionally closed together over and around it, so as to conceal it from all enemies. Lichens, dry leaves of hemlock, and slender twigs formed its exterior. It was delicately lined with the fur of the hare and racoon; and the young lay imbedded in the softest feathers of the Ruffed Grouse. The parents soon became aware of the mischief which we had done; they descended, glided over our heads, manifested the most tender affection and the deepest sorrow, and excited our sympathy so far, that I carefully placed their tender offspring on a fallen log, leaving them to the care of their kind protectors, and contenting myself with their cradle.

I have since met with this species in the State of Maine, and have seen several individuals in Newfoundland; but never again have I found a nest, nor can I say any thing regarding its eggs. Confined as it is to the interior of the forests, I cannot even tell you more respecting its mode of flying than what I have already related, never having observed it performing a longer flight than from one tree to another.

The bird described under the name of *Sylvia autumnalis* by WILSON, BONAPARTE, NUTTALL, myself, and all the compilers, is only the young of this species, *Sylvia parus*. Of this I gave intimation to the Prince of Musignano when in London.

HEMLOCK WARBLER, *Sylvia parus*, Wils. Amer. Orn., vol. v. p. 114. Male.
AUTUMNAL WARBLER, *Sylvia autumnalis*, Wils. Amer. Orn., vol. iii. p. 65. Young.
SYLVIA PARUS, Bonap. Syn., p. 82.
SYLVIA AUTUMNALIS, Bonap. Syn., p. 74.
HEMLOCK WARBLER, *Sylvia parus*, Aud. Orn. Biog., vol. ii. p. 205. Adult.
AUTUMNAL WARBLER, *Sylvia autumnalis*, Aud. Orn. Biog., vol. i. p. 447.

Wings of moderate length, with the outer two quills almost equal, the first longest, the third little shorter; tail very slightly emarginate. Male with the upper parts yellowish-green, spotted with dusky, the head greenish-yellow; secondary coverts and first row of small coverts largely tipped with white; quills and tail-feathers blackish-brown; primaries narrowly edged with greenish-white, secondaries broadly with white; outer two tail-feathers with the greater part white; a bright yellow streak over the eye; a dusky band on the lore and behind the eye; fore-neck and breast bright yellow, the rest of the lower parts white, the sides streaked with black. Female similar to the male, but rather paler. Young with the upper parts light olive-brown; a pale line over the eye, which is encircled by a narrow line of whitish; wings and tail dark brown, the former with two brownish-white bands, the

quills edged with brownish-white, the two outer tail-feathers with a white patch on the inner web; the lower parts dull white, tinged on the neck with yellow, on the sides with greyish-brown.

Male, $5\frac{1}{2}$, $8\frac{1}{2}$.

Middle districts. Rather common. Migratory.

The Dwarf Maple.

Acer spicatum.

This is a low shrubby tree, which does not attain a greater height at most than fifteen or twenty feet. It abounds along the rocky margins of creeks or rivers, especially those meandering at the bases of the Alleghany mountains.

BLACK-THROATED GREEN WOOD-WARBLER.

Sylvicola virens, *Lath.*

PLATE LXXXIV.—Male and Female.

I have traced this species from the Texas to Newfoundland, although at considerable intervals, along our Atlantic coasts, it being of rare occurrence or wanting in some parts, while in others it is abundant; but in no portion of the United States have I met with it so plentiful as around Eastport in Maine, where I saw it in the month of May. Many remain all summer in that State, as well as in Massachusetts, and the northern parts of New York; and some are found at that season even in the higher portions of Pennsylvania. On the coast of Labrador it was not observed by me or any of my party, and it is not mentioned by Dr. Richardson as having been seen in the Fur Countries. Its habits are intermediate between those of many of our Warblers and the Vireos, the notes of which latter it in a great measure assumes. It usually makes its appearance in Maryland and New Jersey about the first week of May, when it is observed to be actively engaged in searching for food, regardless as it were of the presence of man. Its movements when proceeding northward are rapid, and it advances through the woods solitarily or nearly so, it being seldom that more than two or three are found together at this time, or indeed during the breeding season, at which period each pair appropriates to itself a certain extent of ground. Its retrograde

Black-throated Green Wood Warbler.

1. Male. 2. Female.

Caprifolium Sempervirens.

Drawn from Nature by J.J. Audubon, F.R.S.F.L.S.

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march is also rapid, and by the middle of October they all seem to have passed beyond the limits of our most southern States.

The food of this species consists during the summer months of various kinds of flies and caterpillars, many of the former of which it captures by darting after them from its perch, in the manner of Flycatchers and Vireos, emitting like them also a clicking sound from its bill. In the autumn it is often seen feeding on small berries of various sorts, in which respect also it resembles the birds just mentioned. I never found the nest of this bird, of which, however, Mr. NUTTALL has given a minute description, which I shall here, with his permission, place before you. "Last summer (1830), on the 8th of June, I was so fortunate as to find a nest of this species in a perfectly solitary situation, on the Blue Hills of Milton. The female was now sitting, and about to hatch. The nest was in a low, thick, and stunted Virginia juniper. When I approached near to the nest, the female stood motionless on its edge, and peeped down in such a manner that I imagined her to be a young bird; she then darted directly to the earth and ran, but when, deceived, I sought her on the ground, she had very expertly disappeared; and I now found the nest to contain four roundish eggs, white, inclining to flesh-colour, variegated, more particularly at the great end, with pale purplish points of various sizes, interspersed with other large spots of brown and blackish. The nest was formed of circularly entwined fine stripes of the inner bark of the juniper, and the tough white fibrous bark of some other plant, then bedded with soft feathers of the Robin, and lined with a few horse hairs and some slender tops of bent grass (*Agrostis*)."

My friend describes the notes of this species as follows:—"This simple, rather drawling, and somewhat plaintive song, uttered at short intervals, resembles the syllables *'te de' territica*, sometimes *tederisca*, pronounced pretty loud and slow, and the tones proceeding from high to low." These notes I am well acquainted with, but none can describe the songs of our different species like NUTTALL.

I have represented the male and female; the latter, I believe, has not been hitherto figured.

BLACK-THROATED GREEN WARBLER, *Sylvia virens*, Wils. Amer. Orn., vol. ii. p. 127.
SYLVIA VIRENS, Bonap. Syn., p. 80.
BLACK-THROATED GREEN WARBLER, Nutt. Man., vol. i. p. 376.
BLACK-THROATED GREEN WARBLER, *Sylvia virens*, Aud. Orn. Biog., vol. iv. p. 70.

Outer three quills almost equal, second very slightly longer; tail slightly emarginate. Male with the upper parts very light yellowish-green; the anterior part of the forehead, a band over the eye, the cheeks, and the sides of

the neck bright yellow; the fore part of the neck, anterior part of the sides, and some spots on the hind parts of the latter, black; the rest of the lower parts white, partially tinged with yellow; quills and tail-feathers brownish-black; secondary coverts and first row of small coverts largely tipped with white, quills margined with greyish-white, as are the tail-feathers, of which the greater part of the outer three, and a patch on the inner web of the fourth, are white. Female with the upper parts similar, but with less yellow on the forehead; ear-coverts greenish; the yellow band over the eye less bright, the yellow on the sides of the neck of less extent; the lower parts dull yellowish-white, the sides streaked with dusky.

Male, $4\frac{19}{12}$, wing, $2\frac{1}{2}$. Female, $4\frac{1}{2}$, wing, $2\frac{5}{12}$.

From Texas to Newfoundland. Abundant. Migratory.

CAPE MAY WOOD-WARBLER.

SYLVICOLA MARITIMA, *Wils.*

PLATE LXXXV.—MALE AND FEMALE.

Of this beautiful species, which was first described by WILSON, very little is known. It seems to pass rapidly through our Middle Districts in May. I have never met with a single bird of this kind on my rambles, and am indebted for the fine specimens of both sexes in my possession, and from which I drew the figures in the plate, to my generous friend EDWARD HARRIS, Esq. of Moorestown, New Jersey, who procured them, with several others, in that district.

CAPE MAY WARBLER, *Sylvia maritima*, Wils. Amer. Orn., vol. iv. p. 99.
SYLVIA MARITIMA, Bonap. Syn., p. 79.
CAPE MAY WARBLER, *Sylvia maritima*, Nutt. Man., vol. i. p. 156.
CAPE MAY WARBLER, *Sylvia maritima*, Aud. Orn. Biog., vol. v. p. 156.

Wings pointed, first quill longest, the second a quarter of a twelfth shorter, the third a twelfth shorter; tail slightly emarginate. Male with the upper part of the head and fore part of the back yellowish-olive, streaked with black; the rump, throat, and a collar scarcely meeting behind, yellow; ear-coverts and a band over the eye yellowish-red, loral space paler; a white patch on the wing, formed by the first row of small coverts and the outer

Cape May Wood Warbler.

1. Male 2. Female.

Cærulean Wood-Warbler.

1. Old Male 2 Young Male.

Bear-berry and Spanish Mulberry.

edges of the secondary coverts; quills and tail-feathers blackish-brown, edged with dull greyish-white, the secondaries more broadly; tail-feathers edged with yellow at the base, the outer three with a white patch on the inner web near the end; lower parts yellow, streaked with black, abdomen and lower tail-coverts white, the latter tinged with yellow. Female similar to the male, with the tints duller, the dusky streaks on the upper parts very faint, the rump greenish-yellow, the ear-coverts dull yellow, the white of the abdomen more extended, and the black streaks on the breast less distinct.

Male, $5\frac{1}{2}$, $8\frac{1}{2}$.

New Jersey, and Blue Mountains of Vermont. Exceedingly rare.

THE CŒRULEAN WOOD-WARBLER.

SYLVICOLA CŒRULEA, *Wils.*

PLATE LXXXVI.—MALES.

So scarce is this bird in the Middle Districts, that its discovery in the State of Pennsylvania has been made a matter of much importance. Its habits are consequently very little known, even at the present day, and it would appear that only a few individuals have been seen by our American ornithologists, one of which, a young female, has been figured by the Prince of MUSIGNANO.

It arrives in the lower parts of the State of Louisiana, in company with many other species of Warblers, breeds there and sets out again about the beginning of October. It is as lively as most species of its genus, possesses the same manner of flight, moves sidewise up and down the branches and twigs, frequently changing sides, and hangs to the extremities of bunches of leaves or berries, on which it procures the insects and larvæ of which its food is principally composed. The liveliness of its notes renders it conspicuous in those parts of the skirts of the forests which it frequents; and its song, although neither loud nor of long continuance, is extremely sweet and mellow.

I have no precise recollection of the time when I first made a drawing of this pretty little bird, but know this well, that a drawing which I had of it was one of the unfortunate collection destroyed by the rats at Henderson.

In Louisiana, where it is as numerous as other Sylviæ, I have several times shot five or six during a single walk, towards the end of August, when the young are nearly full coloured.

The nest is placed in the forks of a low tree or bush, more frequently on a dog-wood tree. It is partly pensile, projecting a little above the twigs to which it is attached, and extending below them for nearly two inches. The fibres of vines and of the stalks of rank herbaceous plants, together with slender roots, compose the outer part, being arranged in a circular manner. The lining consists entirely of the dry fibres of the Spanish moss. The female lays four or five eggs, of a pure white colour, with a few reddish spots at the larger end. When the female is disturbed during incubation, she trails along the twigs and branches, with expanded tail and drooping wings, and utters a plaintive note, resembling in all these circumstances the Blue-eyed Warbler. I am not sure that they raise more than one brood in a season. When the young abandon the nest, their plumage partakes of a greenish tinge, and no difference can be perceived between the sexes without dissection. The little family move and hunt together, and exhibit much pleasure in pursuing small insects on wing, which they seize without any clicking sound of their bill. They seem at this period to evince a great partiality for trees the tops of which are thickly covered by grape vines, amongst the broad leaves of which they find ample supplies of food. They also sometimes alight on the tall weeds, and pick a few of their seeds. The males or females do not assume the full brilliancy of their plumage until the following spring.

In the course of my late journey to the Texas I found the Azure Warbler entering the United States from Mexico, early in April, when it was in perfect plumage. On an island on which we landed, about an hour before sunset, some hundreds had stopped to pass the night, the appearance of the weather being threatening. My friend Edward Harris and my son shot a number of them. Next day few were seen, and in about a week they had all proceeded eastward. The whole breadth of our country, from the Atlantic shores to those of the Pacific, is visited by this bird, which was found along the Columbia river at Fort Vancouver by Mr. Townsend. The most eastern point at which I have known it to be procured is the neighbourhood of Pictou, Nova Scotia. It is not mentioned by Dr. Richardson.

As to the *Sylvia rara*, my doubts regarding its specific distinction from *Sylvicola cœrulea*, are as great as ever, especially as no one has found its nest. I mentioned this to the Prince of Musignano, who has placed it in his list as the young of *Sylvia azurea*.

Cœrulean Warbler, *Sylvia cœrulea*, Wils. Amer. Orn., vol. ii. p. 141. Male.
Blue-green Warbler, *Sylvia rara*, Wils. Amer. Orn., vol. iii. p. 119. Young.

SYLVIA AZUREA, Bonap. Syn., p. 85.
SYLVIA RARA, Bonap. Syn., p. 82.
CŒRULEAN WARBLER, *Sylvia azurea*, Bonap. Amer. Orn., vol. ii. p. 27. Female.
AZURE WARBLER, *Sylvia azurea*, Aud. Orn. Biog., vol. i. p. 255, Male; vol. v. p. 456.
BLUE-GREEN WARBLER, *Sylvia rara*, Aud. Orn. Biog., vol. i. p. 258. Young Male.

Wings long, with the outer three quills nearly equal, the first and second longest; tail slightly emarginate, upper parts of a fine light blue, brighter on the head, the back marked with longitudinal streaks of blackish; a narrow band of black from the forehead along the lore to behind the eye; two conspicuous white bands on the wings, formed by the tips of the secondary coverts and first row of small coverts; quills black, margined with pale blue; tail-feathers black, edged with blue, all with a white patch on the inner web near the end; lower parts white, with a band of dark bluish-grey across the fore neck, and oblong spots of the same along the sides. Female with the upper parts light bluish-green, the lower and a streak over the eye very pale yellow. Young of both sexes like the female.

Male, $4\frac{1}{2}$, 8.

From Texas to Nova Scotia. Columbia river. Rather common. Migratory.

THE BEAR-BERRY.

ILEX DAHOON, *Mich.*, Fl. Amer., vol. ii. p. 228. *Pursch*, Fl. Amer., vol. i. p. 117.—TETRANDRIA TETRAGYNIA, *Linn.*—RHAMNI, *Juss.*

This species of *holly* is distinguished by its elliptico-lanceolate leaves, which are thick, leathery, shining, and reflected at the margin, and its corymboso-paniculate, lateral and terminal peduncles. The berries are globular and bright red.

THE SPANISH MULBERRY.

CALLICARPA AMERICANA, *Willd.*, Sp. Pl., vol. i. p. 619. *Pursch*, Fl. Amer., vol. i. p. 97.—TETRANDRIA MONOGYNIA, *Linn.*—VITICES, *Juss.*

A perennial herbaceous plant, with oval, serrate leaves, which are downy beneath; sessile cymes of red flowers, and globular red berries, arranged apparently in dense whorls. It grows in dry gravelly or sandy soil in Virginia, Carolina, and Louisiana.

THE BLACKBURNIAN WOOD-WARBLER.

SYLVICOLA BLACKBURNIÆ, *Lath.*

PLATE LXXXVII.—MALE AND FEMALE.

This charming and delicate Warbler passes through the United States in April and May. I have met with it at different times, although sparingly, in every part of the Union, more frequently in the southern districts in spring, and in the eastern in early autumn. In the State of Maine, on the north-eastern confines of the United States, it is not uncommon, and I have reason to think that it breeds in the vicinity of Mars Hill, and other places, along the banks of St. John's river, where my sons and myself shot several individuals, in the month of September. While at Frederickton, New Brunswick, Sir ARCHIBALD CAMPBELL kindly presented me with specimens. On the Magdeleine Islands, in the Gulf of St. Lawrence, which I visited in June 1833, I found the Blackburnian Warbler in all the brilliancy of its spring plumage, and had the pleasure of hearing its sweet song, while it was engaged in pursuing its insect prey among the branches of a fir tree, moving along somewhat in the manner of the American Redstart. Its song, which consisted of five or six notes, was so much louder than could have been expected from the size of the bird, that it was not until I had fairly caught it in the act, that I felt satisfied as to its proceeding from my old acquaintance. My endeavours to discover its nest proved fruitless. In Labrador we saw several individuals of both sexes, and on the coast of Newfoundland, on our return westward, we again found it.

To President MACCULLOCH of Dalhousie Cottage, Halifax, N. S., I am indebted for a nest and three eggs of this bird. While looking at his valuable collection of the Birds of Nova Scotia, my attention was attracted by a case containing nests with eggs, among which was that of the Blackburnian Warbler. It was composed externally of different textures, and lined with silky fibres and thin delicate stripes of fine bark, over which lay a thick bed of feathers and horse-hair. The eggs were small, very conical towards the smaller end, pure white, with a few spots of light red towards the larger end. It was found in a small fork of a tree, five or six feet from the ground, near a brook. The Doctor informed me that it was the only nest he had seen, and that he considered this species of Warbler as rare in the district.

My friend JOHN BACHMAN has since informed me, that, in June 1833, he

Blackburnian Wood Warbler.

1 Male 2 Female.

Phlox maculata?

Drawn from Nature by J.J.Audubon F.R.S.F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen, Phila.ª

saw a pair of these birds engaged in constructing a nest near Lansingburgh, in the State of New York. He never saw the species in the maritime parts of South Carolina.

The specimen from which I made the drawing copied in the plate before you, I procured near Reading in Pennsylvania, on the banks of the Schuylkill river, about thirty years ago. Some specimens shot in New Brunswick in September, were mottled somewhat in the manner of a two years old Tanager or Summer Redbird, being probably very young birds.

BLACKBURNIAN WARBLER, *Sylvia Blackburniæ*, Wils. Amer. Orn., vol. iii. p. 67.
SYLVIA BLACKBURNIÆ, Bonap. Syn., p. 80.
BLACKBURNIAN WARBLER, *Sylvia Blackburniæ*, Nutt. Man., vol. i. p. 379.
BLACKBURNIAN WARBLER, *Sylvia Blackburniæ*, Aud. Orn. Biog., vol. ii. p. 208; vol. v. p. 73.

Outer three quills nearly equal, first generally longest; tail slightly emarginate. Male black above, streaked with white; a small patch on the top of the head, a band from the base of the upper mandible over the eye, passing down the neck and curving forwards, and a small band under the eye, orange-yellow; lore and a patch behind the eye black; quills black, the outer margined with grey, the inner with white, of which there is a large patch on the wing, including the inner secondary coverts, and the tips of the outer, with those of the first row of small coverts; three outer tail-feathers on each side white, excepting an oblong portion toward the end, the next also partially white; throat and fore part of breast rich reddish-orange; breast dull yellow, the rest white; the sides of the neck and body streaked with black. Female with the upper parts light olivaceous, each feather dusky in the centre, the other parts as in the male, but the tints much paler, the spot on the top of the head greenish-yellow, the feathers tipped with dusky, the band over the eye pale yellow, that on the lore and ear-coverts brown, the fore part of the neck yellow, and the sides less strongly streaked with black.

Male, $4\frac{3}{4}$, $7\frac{3}{4}$. Female, $4\frac{5}{12}$, wing $2\frac{7}{12}$.

From Texas northward. Rather rare. Migratory.

PHLOX MACULATA, *Willd.*, Sp. Pl., vol. i. p. 840. *Pursch*, Flor. Amer. Sept., vol. i. p. 149.—PENTANDRIA MONOGYNIA, *Linn.*—POLEMONIA, *Juss.*

Erect; the stem rough, with purplish dots; the leaves oblongo-lanceolate, smooth, with the margin rough; the flowers in an oblong crowded panicle, of a purplish-red tint, the segments of the corolla rounded; the calycine teeth acute and recurved. It grows abundantly in wet meadows, from New England to Carolina. The flowers, although pleasing to the eye, have no scent.

THE YELLOW-POLL WOOD-WARBLER.

SYLVICOLA ÆSTIVA, *Gmel.*

PLATE LXXXVIII.—MALES.

As soon as the welcome note of the Purple Martin is heard in spring, on its return to the United States, which, in Louisiana, sometimes takes place early in March, the little Warbler here presented to your inspection follows, and is seen gaily moving from tree to tree, feeding on the smaller insects, and tuning its pipe, which, however, is not the most melodious. It approaches the gardens and orange-groves, and again flies off to the willows, along the margins of the pools and lagoons. Its sojourn is of short duration in Louisiana, for it moves gradually eastward as the season advances. Its migration, in as far as I have been able to ascertain, is principally performed during the night. I have observed many in the course of one day in a place, which, next day, if the weather had become warm, scarcely contained a single individual. I have seen many of these birds, as well as their nests, on the Genessee river; but in the States of New York, Connecticut, Pennsylvania, Maryland, and Virginia, they may be found in every orchard and garden, and even in the streets, among the foliage of our trees.

The males chase each other with great courage, and fight for a few moments, to establish their claim to any particular spot or tree, after which they are seen climbing up and down among the twigs and smaller branches, looking keenly among the leaves and blossoms for insects. Careless of the presence of man, the Blue-eyed Warbler is easily approached. The same carelessness makes it build its little nest almost always within reach. The parents are very assiduous in the discharge of their duties. They construct a nest about the middle of May, in the forked branches of a small tree, often within a few paces of a house. The nest is strongly fastened to the twigs, is formed externally of hemp, flax, or woolly substances, and is well lined with different kinds of hair, intermixed with softer materials. It breeds twice during the summer, and returns southward in the beginning of autumn, in small parties, shifting chiefly by night. During the breeding-season, this little bird, when approached, shews great anxiety for the preservation of its eggs or young, and tries, with all the artifices employed by many other species, to entice the aggressor away from its nest. They are seen, on their return to the south, passing through Louisiana in October.

Its migrations northward are almost as wonderful as those of several other

Yellow-poll Wood Warbler

Males.

Drawn from Nature by J.J. Audubon F.R.S.E.L.S.

Lith.ª Printed & Col.ª by J.T. Bowen, Philad.ª

birds, that seem, as it were, not to have been endowed with sufficient power of flight to enable them to traverse a vast extent of country. Yet it proceeds in summer as far as the 68th parallel, where it was found by Dr. RICHARDSON in numbers and breeding. Although it comes into the United States from the south at the early period mentioned, thousands follow in the wake of the first that are seen in Louisiana, for, I met with great numbers during the whole month of April, when on my way to the Texas, as well as after my arrival in that country, where they threw themselves into all the bushes along the sea-shore, apparently for the purpose of spending the night. At this period they are quite silent, and many of them have not yet obtained the reddish spots on the breast so conspicuous at a later season.

Mr. NUTTALL was the first naturalist who observed the very curious method in which it contrives to rid itself of the charge of rearing the young of the Cowbird. "It is amusing," he says, "to observe the sagacity of this little bird in disposing of the eggs of the vagrant and parasitic Cow Troopial. The egg deposited before the laying of the rightful tenant, too large for ejectment, is ingeniously incarcerated in the bottom of the nest, and a new lining placed above it, so that it is never hatched to prove the dragon of the brood. Two instances of this kind occurred to the observation of my friend Mr. CHARLES PICKERING; and last summer I obtained a nest with the adventitious egg about two-thirds buried, the upper edge only being visible, so that, in many instances, it is probable that this species escapes from the unpleasant position of becoming a nurse to the sable orphan of the Cowbird. She, however, acts faithfully the part of a foster-parent when the egg is laid after her own."

The following note from my friend Dr. T. M. BREWER shews that this little bird is capable of still greater exploits. "There is a very interesting item in the history of the Yellow-poll Warbler, which has been noticed only within a few years, and which is well deserving of attention, both for the reasoning powers which it exhibits, and for its uniqueness, for it is not known, I believe, to be practised by any other bird. I allude to the surprising ingenuity with which they often contrive to escape the burden of rearing the offspring of the Cow Troopial, by burying the egg of the intruder. I have known four instances in which single eggs have been thus buried by the Yellowbird's building a second story to her nest, and enclosing the intruder between them. In one instance, three of the *Sylvia's* own eggs were thus covered along with that of the Cow Blackbird, and in another, after a Blackbird's egg had been thus concealed, a second was laid, which was similarly treated, thus giving rise to a three-storied nest. This last you have in your possession, and will, I hope, give to the world a drawing as well as a complete description of it. The Summer Yellowbird raises only one brood

in the season in Massachusetts. The eggs, four or five in number, measure $5\frac{1}{2}$ eighths in length, by a trifle more than half an inch in breadth; they are of a light, dull bluish-white, thickly sprinkled with dots and small markings of various sizes of dull reddish-brown, accumulated towards the great end."

The fabric alluded to above may be thus described. A nest of the usual form had been constructed, of which the external diameter was three inches. It is composed of cotton rudely interwoven with flaxen fibres of plants, and lined with cotton of a reddish colour, with some hairs round the inner edges. The egg of the Cowbird having been deposited in this nest, another of a larger size, three inches and three-quarters in external diameter, has been built upon it, being formed of the same materials, but with less of the flaxen fibres. The egg is thus surmounted by a layer three-quarters of an inch thick, and was discovered by opening the lower nest from beneath. It is agglutinated to the lining of the nest, having been addled and probably burst. In this second nest a Cowbird had also deposited an egg, which was, in like manner, covered over by a third nest, composed of the same materials, and of nearly the same size as the second.

The birds represented in the thirty-fifth plate of my large work, and dedicated to Mr. CHILDREN, I have since found to be the young of this bird, probably of a late brood of the previous year, they having been found breeding at a period when this species shews few or none of the reddish spots on the breast, the want of which induced me to consider them as of a distinct species. These circumstances I mentioned to the Prince of MUSIGNANO, in London, my friend Dr. BACHMAN and myself having discovered the error soon after the publication of my first volume of Ornithological Biography.

I made my drawing of this species near Natchez, and having killed the specimen while it was searching for insects among the flowers of a large climbing plant, I have figured part of the latter also. This plant I have never seen, excepting in low, damp or marshy places. It there runs over decayed trees, spreading in the form of a bower, and hanging in graceful festoons. The long pendulous clusters of pale purple flowers are destitute of odour.

All our little birds known by the name of Warblers, and referred by authors to the genera *Sylvicola*, *Trichas*, and *Vermivora*, present the same structure in their digestive and respiratory organs. Their œsophagus is rather narrow, without dilatation; the proventriculus bulbiform, with numerous oblong glandules; the stomach rather small, oblique, elliptical or roundish, with the lateral muscles distinct, but of moderate thickness, the lower muscle thin, the epithelium dense, reddish-brown, and longitudinally rugous when not filled; the intestine rather short and of moderate width; two very small cœca; the rectum gradually enlarged. The trachea is composed of

Rathbone's Wood-Warbler.

1. Male ♀. Female.

Ramping Trumpet-flower.

Drawn from Nature by J.J. Audubon F.R.S.F.L.S. Lith.ᵈ Printed & Col.ᵈ by J. T. Bowen, Philad.ᵃ

from 60 to 80 rings, flattened, somewhat tapering; the bronchi of ordinary size, of from 12 to 15 rings; there are cleido-tracheal muscles, lateral muscles, sterno-tracheal, and four pairs of inferior laryngeal.

BLUE-EYED WARBLER, *Sylvia citrinella*, Wils. Amer. Orn., vol. ii. p. 111.
SYLVIA ŒSTIVA, Bonap. Syn., p. 83.
YELLOW-POLL WARBLER, *Sylvia æstiva*, Aud. Orn. Biog., vol. i. p. 476; vol. v. p. 453. Adult Male.
CHILDREN'S WARBLER, *Sylvia Childrenii*, Aud. Orn. Biog., vol. i. p. 180. Young.

Outer four quills nearly equal, second longest; tail emarginate. Male with the upper parts pale yellowish-green, the rump greenish-yellow, the fore part of the head, cheeks, throat, sides of the neck and lower parts pure yellow, the breast and sides streaked with brownish-red; feathers of the wings deep brown, primaries margined with yellowish-green, secondaries, their coverts, and the first row of small coverts with yellow; tail-feathers brown, with the greater part of the inner webs and a portion of the outer, yellow, excepting the middle two. Female similar, but with the colours less bright, and the streaks on the breast and sides obsolete. Young with the upper parts yellowish-green, tinged with brown; forehead, sides of head, and lower parts deep yellow.

Male, $4\frac{3}{4}$, 8.

From Texas northward, and throughout the interior. Abundant. Migratory.

RATHBONE'S WOOD-WARBLER.

SYLVICOLA RATHBONII, *Aud.*

PLATE LXXXIX.—MALE AND FEMALE.

Kind reader, you are now presented with a new and beautiful little species of Warbler, which I have honoured with the name of a family that must ever be dear to me. Were I at liberty here to express the gratitude which swells my heart, when the remembrance of all the unmerited kindness and unlooked-for friendship which I have received from the RATHBONES of Liverpool comes to my mind, I might produce a volume of thanks. But I must

content myself with informing you, that the small tribute of gratitude which alone it is in my power to pay, I now joyfully accord, by naming after them one of those birds, to the study of which all my efforts have been directed. I trust that future naturalists, regardful of the feelings which have guided me in naming this species, will continue to it the name of Rathbone's Wood-Warbler.

I met with the species now under consideration only once, when I procured both the male and the female represented in the plate. They were actively engaged in searching for food amongst the blossoms and leaves of the *bignonia*, on which I have placed them. All my endeavours to discover their nest, or to procure other individuals, having proved abortive, I am unable to say any thing of their habits and history; but should I be more fortunate at some future period, I shall not fail to record the result of my observations respecting this delicate little Warbler.

The bignonia, on which they are represented, grows abundantly in the low alluvial grounds of the States of Mississippi and Louisiana, sparingly in Tennessee, and about the mouth of the Ohio. It twines round the trunks of various trees, and produces beautiful flowers, in which Humming-birds are frequently seen to search for the minute insects which form their food. They are destitute of smell, but are seen both during spring and autumn.

RATHBONE'S WARBLER, *Sylvia Rathbonia*, Aud. Orn. Biog., vol. i. p. 333.

Wings of ordinary length, the second quill longest; tail nearly even. The general colour of the plumage bright yellow, the upper parts olivaceous; quills and tail wood-brown, the former yellow on the outer web, the latter margined externally with the same. Female similar.

Male, $4\frac{1}{2}$.

Mississippi. Only one pair seen.

THE RAMPING TRUMPET-FLOWER.

BIGNONIA CAPREOLATA, *Willd.*, Sp. Pl., vol. iii. p. 297. *Pursch*, Flor. Amer., vol. ii. p. 419.—DIDYNAMIA ANGIOSPERMIA, *Linn.*—BIGNONIÆ, *Juss.*

This species is distinguished by its conjugate cirrhous leaves, with oblongo-lanceolate leaflets, which are somewhat cordate at the base, the lower leaves single. The flowers are carmine.

Yellow Red-poll Wood Warbler.

1. Males. 2. Young.

Wild Orange Tree.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.ª Printed & Col.ª by J.T.Bowen, Phila.ª

THE YELLOW RED-POLL WOOD-WARBLER.

SYLVICOLA PETECHIA, *Lath.*

PLATE XC.—MALES AND YOUNG.

I most willingly acknowledge the error under which I laboured many years, in believing that this species and the *Sylvia palmarum* of BONAPARTE, are distinct from each other. To the sound judment of my good friend JOHN BACHMAN, I am indebted for convincing me that the figure given by the Prince of MUSIGNANO is that of our present bird, at a different period of life, and therefore with different plumage. While at Charleston, in the winter and spring of 1833-4, I became convinced of my error, after examining a great number of specimens, in different states of plumage. All these individuals had the same habits, and uttered the same notes. I may here remark, that the true *Sylvia palmarum* has not yet been met with in the United States.

The Yellow Red-poll Warbler is extremely abundant in the Southern States, from the beginning of November to the first of April, when it migrates northward. It is one of the most common birds in the Floridas during winter, especially along the coasts, where they are fond of the orchards and natural woods of orange trees. In Georgia and South Carolina they are also very abundant, and are to be seen gambolling, in company with the Yellow-rumped Warbler, on the trees that ornament the streets of the cities and villages, or those of the planter's yard. They approach the piazzas and enter the gardens, in search of insects, on which they feed principally on the wing, now and then securing some by moving slowly along the branches. It never removes from one spot to another, without uttering a sharp twit, and vibrating its tail in the manner of the Wagtails of Europe, though less frequently. I never saw this species in Pennsylvania in summer, although occasionally in the month of May it is to be seen for a few days. It is very rare in Maine; but I found it abundant in Newfoundland and Labrador, where I seldom passed a day without searching for its nest, although I am sorry to say, in vain. In the month of August the old birds were feeding their young all around us, and preparing to return to milder winter quarters.

Nothing can be more gladdening to the traveller, when passing through the uninhabited woods of East Florida, than the wild orange groves which he sometimes meets with. As I approached them, the rich perfume of the

blossoms, the golden hue of the fruits, that hung on every twig, and lay scattered on the ground, and the deep green of the glossy leaves, never failed to produce the most pleasing effect on my mind. Not a branch has suffered from the pruning-knife, and the graceful form of the tree retains the elegance it received from nature. Raising their tops into the open air, they allow the uppermost blossoms and fruits to receive the unbroken rays of the sun, which one might be tempted to think are conveyed from flower to flower, and from fruit to fruit, so rich and balmy are all. The pulp of these fruits quenches your thirst at once, and the very air you breathe in such a place refreshes and reinvigorates you. I have passed through groves of these orange trees fully a mile in extent. Their occurrence is a sure indication of good land, which in the south-eastern portion of that country is rather scarce. The Seminole Indians and poorer Squatters feed their horses on oranges, which these animals seem to eat with much relish. The immediate vicinity of a wild orange grove is of some importance to the planters, who have the fruit collected and squeezed in a horse-mill. The juice is barrelled and sent to different markets, being in request as an ingredient in cooling drinks. The straight young shoots are cut and shipped in bundles, to be used as walking sticks.

YELLOW RED-POLL WARBLER, *Sylvia petechia*, Wils. Amer. Orn., vol. vi. p. 19.
SYLVIA PETECHIA, Bonap. Syn., p. 83; *S. palmarum*, p. 78.
SYLVICOLA PETECHIA, *Yellow Red-poll Warbler*, Swains. & Rich. F. Bor. Amer., vol. ii. p. 215.
YELLOW RED-POLL WARBLER, *Sylvia petechia*, Nutt. Man., vol. i. p. 364.
YELLOW RED-POLL WARBLER, *Sylvia petechia*, Aud. Orn. Biog., vol. ii. p. 259, Adult Male and Young; p. 360, Adult Male and Female.

Wings of ordinary length, with the outer three quills almost equal, the second longer than the first, which slightly exceeds the fourth; tail emarginate. Male with the crown of the head deep brownish-red, the upper parts yellowish-olive, streaked with brown; the rump greenish-yellow, without streaks; quills dusky brown, primaries edged with whitish, secondaries with yellowish; tail feathers dusky brown, margined with greenish-yellow, the outer two with a white patch on the inner web at the end, sometimes the outer white on both webs at the end; a bright yellow streak from the nostril over the eye; lore dusky; ear-coverts brownish-red; lower parts yellow; the sides of the neck, its lower part, and the sides of the body, streaked with deep red. Female similar to the male, but with the tints duller and paler, the red of the head scarcely apparent, and the fore-neck very faintly streaked. Young dull light greenish-brown, tinged with grey, the head streaked with dusky; lower parts yellowish-grey, the sides of the neck and body, with the breast, faintly streaked with greyish-brown.

Blue yellow-backed Wood-Warbler.

1. Male 2. Female.

Louisiana Flag.

Drawn from Nature by J.J.Audubon F.R.S.F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen. Philad.ª

Male, 4½, 8½.

From Texas northward. Very abundant. Spends the winter in all the Southern States.

THE BLUE YELLOW-BACKED WOOD-WARBLER.

SYLVICOLA AMERICANA, *Lath.*

PLATE XCI.—MALE AND FEMALE.

This pretty species enters Louisiana from the south as early as spring appears, at the period when most insects are found closer to the ground, and more about water-courses, than shortly after, when a warmer sun has invited every leaf and blossom to hail the approach of that season when they all become as brilliant as nature intended them to be. The little fellow under your eye is then seen flitting over damp places, such as the edges of ponds, lakes, and rivers, chasing its prey with as much activity and liveliness as any other of the delicate and interesting tribe to which it belongs. It alights on every plant in its way, runs up and down it, picks here and there a small winged insect, and should one, aware of its approach, fly off, pursues it and snatches it in an instant.

I have placed a pair of these Warblers on a handsome species of *iris*. This plant grows in the water, and in the neighbourhood of New Orleans, a few miles below that city, where I found it abundantly, and in bloom, in the beginning of April. Several flowers are produced upon the same stem. I have not met with it anywhere else, and the name of *Louisiana flag* is the one commonly given it.

As soon as the foliage of the forests begins to expand, the Blue Yellow-backed Warbler flies to the tops of the trees, and there remains during the season, gleaning amongst the leaves and branches, in the same active manner as it employed when nearer the ground, not leaving off its quick and short pursuit of small insects on the wing. When on the branches, it frequently raises its body (which is scarcely larger when stripped of its feathers than the first joint of a man's finger) upwards to the full length of its legs and toes, and is thus enabled to seize insects otherwise beyond its reach.

Its flight is that of a true Sylvia. It ascends for awhile in a very zigzag

manner, and returns suddenly to nearly the same place, as if afraid to encounter the dangers of a prolonged excursion. I do not think it ever flies to the ground. It hops sidewise as well as straight forward, hangs like a Titmouse, and searches the cups of even the smallest flowers for its favourite insects.

I am inclined to think that it raises two broods in a season, having seen and shot the young on the trees, in Louisiana, early in May, and again in the beginning of July. The nest is small, formed of lichens, beautifully arranged on the outside, and lined with the cottony substances found on the edges of different mosses. It is placed in the fork of a small twig, and so far towards the extremity of the branches as to have forced me to cut them ten or fifteen feet from it, to procure one. On drawing in the branch carefully to secure the nest, the male and female always flew towards me, exhibiting all the rage and animosity befitting the occasion. The eggs are pure white, with a few reddish dots at the larger end, and were in two instances four in number. It was several years before I discovered one of these nests, so small are they, and so difficult to be seen from the ground.

This species is found throughout the United States, and may be considered as one of the most beautiful of the birds of our country. It has no song, but merely a soft, greatly prolonged twitter, repeated at short intervals. It returns southward, out of the Union, in the beginning of October.

BLUE YELLOW-BACK WARBLER, *Sylvia pusilla*, Wils. Amer. Orn., vol. iv. p. 17.
SYLVIA AMERICANA, Bonap. Syn., p. 83.
BLUE YELLOW-BACKED WARBLER, *Sylvia Americana*, Aud. Orn. Biog., vol. i. p. 78.

Bill much attenuated; outer three quills nearly equal, first or second longest; tail almost even, with the feathers pointed. Male with the upper parts light blue, the fore part of the back yellowish-green; two broad bands of white on the wing, formed by the tips of the secondary coverts, and first row of small coverts; quills and tail-feathers dusky, margined with blue; a white spot on the outer three of the latter; loral space black; both eyelids with a white spot; throat yellow, with whitish patches, a lunular band of blackish on the fore neck; breast yellow, spotted with dull orange, the rest of the lower parts yellowish, fading into white; the sides pale greyish-blue. Female similar but paler; the loral band wanting; throat, fore neck, and breast yellow, without the black lunule.

Although the bill of this species is much attenuated, it is not essentially different in form from that of *S. Blackburniæ*, and others of this genus; the wings are similar to those of the rest, and there seems no reason for setting it apart to form a genus, as has been done by BONAPARTE.

Male, $4\frac{1}{6}$, $6\frac{1}{2}$.

R.F.

Townsend's Wood Warbler.

Male.

Carolina Allspice.

Drawn from Nature by J.J. Audubon, F.R.S. F.L.S. Lith.d Printed & Col.d by J.T. Bowen, Phila.a

From Texas, generally distributed. Exceedingly abundant. Migratory.

THE COPPERY IRIS, OR LOUISIANA FLAG.

IRIS CUPREA, *Pursh*, Fl. Amer., vol. i. p. 30.—TRIANDRIA MONOGYNIA, *Linn.*—IRIDES, *Juss.*

"Beardless, the stem equal in height to the leaves, which are broadly ensiform, the stigmas linear and short, all the petals emarginate, reflected, and obovate, the inner shorter, the capsules large and hexagonal. Found on the banks of the Mississippi, near New Orleans. Flowers of a beautiful copper colour, veined with purple."

TOWNSEND'S WOOD-WARBLER.

SYLVICOLA TOWNSENDI, *Nuttall.*

PLATE XCII.—MALE.

Mr. NUTTALL has honoured this beautiful Warbler with the name of his friend and companion Mr. TOWNSEND. It was procured about the Columbia river. All the information respecting it that I possess is contained in the following brief notice by the former of these celebrated naturalists. "Of this fine species we know very little, it being one of those transient visiters, which, on their way to the north, merely stop a few days to feed and recruit, previous to their arrival in the higher latitudes, or afterwards disperse in pairs, and are lost sight of till the returning wants and famine of the season impel them again to migrate, when, falling on the same path, they are seen in small silent flocks advancing toward the retreat they seek out for their temporary residence. As this species frequents the upper parts of the lofty firs, it was almost an accident to obtain it at all. The female remains unknown."

The plant represented, *Calycanthus floridus*, the Carolina allspice, is much esteemed on account of the fragrance of its large purple flowers, and abounds in the Southern States, growing on the margins of swamps and rivulets.

SYLVIA TOWNSENDI, *Townsend's Warbler*, Towns., Jour. Acad. Nat. Sc. Philadelphia, vol. vii. p. 191.

TOWNSEND'S WARBLER, *Sylvia Townsendi*, Aud. Orn. Biog., vol. v. p. 36.

Wings of moderate length, rather pointed, with the second and third quills longest, the first and second nearly equal and very little shorter; tail scarcely emarginate. Upper parts light greenish-olive, more yellow behind, all the feathers dusky in the centre; cheeks, ear-coverts, and throat black; a band over the eye, a broader band on the side of the neck, and the fore part of the breast bright yellow; the rest of the lower parts white, but the sides marked with oblong dusky spots; wings blackish-brown; the secondary coverts and first row of small coverts largely tipped with white, the quills margined with light grey; tail-feathers blackish-brown, edged with grey; outer two on each side almost entirely white, the next with a small white spot.

Male, $4\frac{10}{12}$, wing $2\frac{8}{12}$.

Columbia river, northward. Migratory.

HERMIT WOOD-WARBLER.

SYLVICOLA OCCIDENTALIS, *Townsend.*

PLATE XCIII.—MALE AND FEMALE.

Of this species discovered by Mr. TOWNSEND and Mr. NUTTALL, in the forests of the Columbia river, all that I know is contained in the following notes from these enterprising naturalists:—"The Hermit Warbler," says Mr. NUTTALL, "I have little doubt, breeds in the dark forests of the Columbia, where we saw and heard it singing in the month of June. It is a remarkably shy and solitary bird, retiring into the darkest and most silent recesses of the evergreens, where, gaining a glimpse of light by ascending the loftiest branches of the gigantic firs, it occupies in solitude a world of its own, but seldom invaded even by the prying Jay, who also retreats, as a last resort, to the same sad gloom. In consequence of this eremitic predilection, it was with extreme difficulty that we ever got sight of our wily and retiring subject, who, no doubt, breeds and feeds in the tops of these pines. Its song, frequently heard from the same place, at very regular intervals, for an hour

Hermit Wood Warbler

1. Male. 2. Female.

Strawberry Tree

Drawn from Nature by J. J. Audubon F.R.S.F.L.S. Lith.ᵈ Printed & Col.ᵈ by J. T. Bowen, Philad.ᵃ

or two at a time, is a soft, moody, faint, and monotonous note, apparently delivered chiefly when the bird is at rest on some lofty twig, and within convenient hearing of its mate and only companion of the wilderness."

Mr. TOWNSEND's note is as follows:—I shot this pair of birds near Fort Vancouver, on the 28th of May, 1835. I found them flitting among the pine trees in the depth of a forest. They were actively engaged in searching for insects, and were frequently seen hanging from the twigs like Titmice. Their note was uttered at distant intervals, and resembled very much that of the Black-throated Blue Warbler, *Sylvia canadensis*."

SYLVICOLA OCCIDENTALIS, *Hermit Wood-Warbler*, Towns., Journ. Acad. Nat. Sc. Philadelphia, vol. vii. p. 190.
HERMIT WARBLER, *Sylvia occidentalis*, Aud. Orn. Biog., vol. v. p. 55.

Wings of moderate length, the outer three quills almost equal, the third longest; tail slightly emarginate. Male with the upper parts bluish-grey, spotted with black; the upper part of the head, which is similarly spotted, the cheeks, and sides of the neck, bright yellow; throat black; breast and abdomen white; ground and tail-feathers greyish-dusky; two white bands on the wing formed by the tips of the secondary coverts and first row of small coverts; two outer tail-feathers on each side almost entirely white. Female with the upper parts of a duller grey, the yellow of the head less extended and not so bright; throat whitish, spotted with dusky.

Male, $3\frac{5}{12}$, wing $2\frac{8}{12}$.

Columbia river. Migratory.

For a description of the plant see page 28.

BLACK-THROATED GREY WOOD-WARBLER.

SYLVICOLA NIGRESCENS, *Townsend.*

PLATE CXIV.—MALES.

This is another of the interesting species discovered and named by Mr. TOWNSEND, who informs me that it is called *"Ah Kah a qual"* by the Chinook Indians; that it is abundant in the forests of the Columbia, where it breeds and remains until winter; and that the nest, formed externally of fibrous green moss, is generally placed on the upper branches of the oak, suspended between two small twigs. Mr. NUTTALL's notice respecting it is as follows:—"This curious species, so much resembling *Sylvia striata*, was seen to arrive early in May; and from its song more regularly delivered at intervals, in the tops of deciduous-leaved trees, we have little doubt but that they breed in the forests of the Columbia. On the 23d of May I had the satisfaction of harkening to the delicate but monotonous song of this bird, as he busily and intently searched every leafy bough and expanding bud for larvæ and insects in a spreading oak, from whence he delivered his solitary note. Sometimes he remained a minute or two stationary, but more generally continued his quest for prey. His song, at short and regular intervals, seemed like *'t shee 't shay t shaitshee*, varying the feeble sound very little, and with the concluding note somewhat slenderly and plaintively raised."

SYLVIA NIGRESCENS, *Black-throated Grey Warbler*, Jour. Acad. Nat. Sc. Philadelphia, vol. vii. p. 191.
BLACK-THROATED GREY WARBLER, *Sylvia nigrescens*, Aud. Orn. Biog., vol. v. p. 57.

Wings of moderate length, with the outer three quills nearly equal, the second longest, the first shorter than the fourth; tail slightly rounded and emarginate. Male with the upper parts bluish ash-grey, the middle of the back and tail-coverts streaked with black; the upper part of the head and neck, the loral space and cheeks, and the fore part of the neck, with a small portion of the breast, black; a band from the nostril to near the eye, yellow; a band over the eye, and another from the lower mandible along the side of the neck, white; breast and abdomen white, the sides tinged with grey, and streaked with black; wings blackish-brown, with two white bands formed by the tips of the secondary coverts and first row of small coverts; quills

Black-throated Grey Wood Warbler.

Males.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.ª Printed & Col.ª by J.T.Bowen, Philad.ª

Black-throated Blue Wood-Warbler

1. Male. 2. Female.

Canadian Columbine

Drawn from Nature by J.J. Audubon, F.R.S. F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen, Philad.ª

edged with light grey; tail blackish-brown, the two outer feathers on each side almost entirely white, the next with a white patch on the inner web.

Male 5, wing $2\frac{8}{12}$.

Columbia river. Migratory.

THE BLACK-THROATED BLUE WOOD-WARBLER.

SYLVICOLA CANADENSIS, *Linn.*

PLATE XCV.—MALE AND YOUNG.

I have met with this species in every portion of the Southern and Western States, where, however, it is seen only in the early part of spring and in autumn, on its passage to and from its summer residence. In South Carolina it arrives about the 25th of March, and becomes more abundant in April; but it has left that country by the 10th of May. During its stay there, it keeps in deep woods, where it may be seen passing among the boughs, at a height of from ten to twenty feet from the ground.

Proceeding eastward, we find it more numerous, but residing only in the depths of the morasses and swampy thickets. I saw many individuals of the species in the Great Pine Forest of Pennsylvania, after which I traced it through the upper parts of the State of New York into Maine, the British Provinces, and the Magdeleine Islands, in the Bay of St. Lawrence. In Newfoundland I saw none, and in Labrador only a dead one, dry and shrivelled, deposited like a mummy in the fissure of a rock, where the poor bird had fallen a victim to the severity of the climate, from which it had vainly endeavoured to shelter itself.

I am indebted to the generous and most hospitable Dr. MACCULLOCH of Halifax for the nest and eggs of this Warbler, which had been found by his sons, who are keen observers of birds. The nest is usually placed on the horizontal branch of a fir-tree, at a height of seven or eight feet from the ground. It is composed of slips of bark, mosses, and fibrous roots, and is lined with fine grass, on which is laid a warm bed of feathers. The eggs, four or five in number, are of a rosy tint, and, like those of most other Sylviæ, scantily sprinkled with reddish-brown at the larger end. Only one brood is raised in a season. The young, when fully fledged, resemble their

parents in the colours of their plumage, which, however, is mixed with duller tints, the differences indicative of the sex being already observable.

The Black-throated Blue Warbler is an expert catcher of flies, pursues insects to a considerable distance in all directions, and in seizing them snaps its bill so as to produce a clicking sound. It now and then alights on a low plant, such as that represented in the plate, and moves along the branches searching for pupæ, ants, and insects. I have never heard its love-song, but its common note is a rather melancholy *cheep*. I am inclined to believe that it breeds in the State of Maine, having seen several individuals of both sexes not far from Eastport, in the beginning of June 1833, when several other species had nests.

The birds represented in Plate 148 of my large edition as *Sylvia sphagnosa*, are the young of the Black-throated Blue Warbler, the female of which resembles them so much that I looked upon it as of a species distinct from the male. I have no doubt that this error originated with WILSON, who has been followed by all our writers. Now, however, the *Sylvia* or *Sylvicola sphagnosa* of BONAPARTE, which he altered from WILSON's *S. pusilla*, must be erased from our Fauna. This bird extends to the head waters of the Missouri, but is not mentioned as occurring in the Fur Countries. I found it abundant on my way to the Texas in the beginning of April; I have also seen it plentiful in June about Boston, where, however, it does not breed. Of this fact also I gave the first intimation to the Prince of MUSIGNANO.

MOTACILLA CANADENSIS, Linn. Syst. Nat., vol. i. p. 334.
BLACK-THROATED BLUE WARBLER, *Sylvia canadensis*, Wils. Amer. Orn., vol. ii. p. 115. Male.
SYLVIA CANADENSIS, Bonap. Syn., p. 84. Male.
BLACK-THROATED BLUE WARBLER, *Sylvia canadensis*, Nutt. Man., vol. i. p. 398. Male.
BLACK-THROATED BLUE WARBLER, *Sylvia canadensis*, Aud. Orn. Biog., vol. ii. p. 309. Male.
PINE-SWAMP WARBLER, *Sylvia pusilla*, Wils. Amer. Orn., vol. v. p. 100. Young.
SYLVIA SPHAGNOSA, Bonap. Syn., p. 85. Young.
PINE-SWAMP WARBLER, *Sylvia sphagnosa*, Nutt. Man., vol. i. p. 406. Young.
PINE-SWAMP WARBLER, *Sylvia sphagnosa*, Aud. Orn. Biog., vol. ii. p. 279. Female and Young. Vol. v. p. 458.

Wings rather long, with the third quill longest, the second almost equal, the fourth longer than the first; tail even. Male dull light blue above, white beneath; frontal band, cheeks, throat, and sides, black; a white patch on the wing formed by the bases of the primaries; outer three tail-feathers with a patch of white on the inner web near the end, all the rest with a touch of the same. Female greenish-olive above, light dull yellow below, with a less extended white patch on the wing, the white on the tail unconspicuous. Young similar to the female.

Black & yellow Wood-Warbler

1 Male 2 Female 3 Young

Flowering Raspberry Rubus odoratus

Drawn from Nature by J.J.Audubon F.R.S.F.L.S.

Lith.d Printed & Col.d by J.T. Bowen Phila.a

Male, 5, 7½.
From Texas northward. Migratory. Abundant.

THE CANADIAN COLUMBINE.

AQUILEGIA CANADENSIS, *Willd.*, Sp. Pl., vol. ii. p. 1247. *Pursch*, Flor. Amer. Sept., vol. ii. p. 372.—POLYANDRIA PENTAGYNIA, *Linn.*—RANUNCULACEÆ, *Juss.*

This species, which has the flowers of a bright red mixed with yellow, and is characterized by having the horns of the nectaries or petals straight, grows in the crevices of rocks, and in dry places near rivulets.

THE BLACK-AND-YELLOW WOOD-WARBLER.

SYLVICOLA MACULOSA, *Lath.*

PLATE XCVI.—MALE, FEMALE, AND YOUNG.

Few of our Warblers have a more varied plumage, or are more animated in their motions, than this beautiful little bird. In Louisiana it is met with now and then as early as the middle of March, but there its occurrence appears to be merely accidental, as is indeed the case in Kentucky, Ohio, or any portion of the Middle States, through which a few are to be seen on their passage to more northern regions. In autumn I have seen them in great numbers near the Pocano Mountains, accompanied by their young, proceeding southward, as I thought, along the direction of that range. While in Maine, on my way to Labrador, in the month of May, I observed them to be very abundant by the roads, in the fields, the low woods, and even the orchards and gardens. In fact, so numerous were those interesting birds, that you might have fancied that an army of them had assembled to take possession of the country. Scarce a leaf was yet expanded, large icicles hung along the rocky shores, and I could not but feel surprised at the hardihood of the little adventurers. At night they roosted in numbers in the small evergreen trees, and by day they were to be seen flitting about wherever the sun shone. If the morning was cold, you might catch them with the hand, and several specimens, procured in that manner by children, were brought to

me. This happened in the neighbourhood of Eastport. By the end of a fortnight, the greater part of them had pushed farther north. I met them wherever I landed in the neighbouring islands, and along the shores of the Bay of Fundy, as well as in the Straits of Canso, the Magdeleine Isles, and Labrador. I have no doubt that the extraordinary congregation which I saw near Eastport, was caused by the foresight of the tiny travellers, aware that they could not at so early a period proceed farther without imminent danger. Many of these birds, however, remain and breed in the State of Maine, and in the British Provinces.

The Black-and-Yellow Warbler has a clear and sweetly modulated song, surpassing that of many other birds of its tribe. It sings in the interior of the low woods, to which it seems at all times to give a decided preference. Its motions are extremely graceful; its tail is constantly spread as it flits along the branches, or even while it is on the ground, to which it frequently betakes itself, and its wings are usually held in a drooping position, so as to display all the beauty of its plumage. It feeds on insects and their larvæ. Now and then it may be seen balancing itself in the air, opposite a cluster of leaves, among which it darts to secure its prey; and not unfrequently it emerges a few feet from among the foliage of a tree or bush, to seize a fluttering insect. In catching its prey, it does not produce the clicking sound, caused by the sudden meeting of the mandibles, so remarkable in some other species.

The nest, which is placed deep among the branches of low fir trees, is supported by horizontal twigs, and is constructed of moss and lichens, lined with fibrous roots, and a great quantity of feathers. In one, found in Labrador, in the beginning of July, there were five small eggs, rather more elongated than is usual in the genus. They were white, sprinkled with reddish dots near the larger end. The female, on being disturbed, spread out her wings and tail, fluttered along the branches in the agony of despair, lingered trembling about the spot, and returned to the nest while we were only a few yards distant from it.

During the first days of August, I saw many of the young following their parents, and perceived that some were already on their way southward. While in the Bay of St. George, Newfoundland, I again saw these birds daily, although they became scarcer the longer we remained in the country. I also traced their retrograde flight into Nova Scotia, but on landing in the United States lost sight of them.

This beautiful Warbler is, according to Dr. RICHARDSON, a common bird on the banks of the Saskatchewan river, where it enlivens the thickets of young spruce trees and willows with its agreeable notes. It was not observed by Mr. TOWNSEND on the Rocky Mountains or along the Columbia river.

As I proceeded towards the Texas, in the beginning of April, I found it in considerable numbers on its way toward the United States. The eggs measure five-eighths and three-fourths in length, four-eighths and a half in breadth; in some instances the ground-colour is slightly tinged with very pale yellow.

BLACK-AND-YELLOW WARBLER, *Sylvia magnolia*, Wils. Amer. Orn., vol. iii. p. 63. Adult.
SYLVIA MACULOSA, Bonap. Syn., p. 78.
BLACK-AND-YELLOW WARBLER, *Sylvia maculosa*, Nutt. Man., vol. i. p. 370.
SYLVICOLA MACULOSA, *Yellow-rump Warbler*, F. Bor. Amer., vol. ii. p. 213.
BLACK-AND-YELLOW WARBLER, *Sylvia maculosa*, Aud. Orn. Biog., vol. ii. p. 145, Adult; vol. i. p. 260, Young; vol. v. p. 458.

Wings of moderate length, the outer four quills nearly equal, the second and third longest and equal, the fourth longer than the first; tail almost even. Upper part of head and hind neck ash-grey; eye-lids, and a band over the eye, white; part of forehead, loral space, and a broad band down the side of the neck, with the fore part of the back, and upper tail-coverts, deep black; lower parts and rump bright yellow; the lower part of the throat, the breast and sides, spotted with black; wings and tail-feathers brownish-black, edged with grey; two white bands on the wing; all the tail-feathers, except the middle two, with a large patch of white on the inner web, at about two-thirds of their length. Young yellowish-grey above, with the head light grey, the rump yellow; lower parts of a duller yellow, with only faint dusky streaks on the sides.

Male, 5, 7½.

From Texas northward. Very abundant. Migratory.

THE FLOWERING RASPBERRY.

RUBUS ODORATUS, *Willd.*, Sp. Pl., vol. ii. p. 1085. *Pursch*, Fl. Amer. Sept., vol. i. p. 348. —ICOSANDRIA POLYGYNIA, *Linn.*—ROSACEÆ, *Juss.*

This species of rasp has the stems hispid; the leaves three or five-lobed, acute; the flowers in lateral and terminal corymbs, with divaricate stalks and appendiculate calyces. It is abundant in the Middle and Eastern, but rare in the Southern and Western Districts. It forms part of the rich undergrowth of our woods, and also grows in old fields with other species of the genus. The flowers are rose-coloured and showy, but destitute of odour, and the fruit is delicious and highly fragrant, from which circumstance the species derives its name.

THE PRAIRIE WARBLER.

SYLVICOLA DISCOLOR, *Vieill.*

PLATE XCVII.—MALE AND FEMALE.

This little bird has no song, at least I never heard any from it, excepting a delicate soft *whirr*, ejaculated whilst it stands erect on the top of some rank weed or low bush. Its nest, which forms by far the most interesting part of its history, is uncommonly small and delicate. Its eggs I have uniformly found to be four in number, and of a white colour, with a few brownish spots near the larger end. The nest is sometimes attached to three or four blades of tall grass, or hangs between two small sprigs of a slender twig. At first sight, it seems to be formed like that of the Humming-bird, the external parts being composed of delicate grey lichens and other substances, and skins of black caterpillars, and the interior finished with the finest fibres of dried vines. Two broods are reared each season.

In Louisiana I found this bird amongst our cotton fields, where it easily procures the small insects and flies of which its food is entirely composed. It is also found in the prairies along the skirts of the woodlands. I have shot several within a few miles of Philadelphia, in the Jerseys, in a large opening where the woods had been cut down, and were beginning to spring up again. Its flight is light and short, it making an effort to rise to the height of eight or ten yards, and immediately sinking down to the grass or bushes. Whilst on the ground, where it remains a good deal, it searches amongst the leaves slowly and carefully, differing in this respect from all the *true* Warblers with which I am acquainted. They go singly, and far apart, scarcely more than three or four being ever seen on an extent of twenty or thirty acres. It is one of the first birds that arrives in spring in Louisiana, and one of the first to depart, being rarely found after the first week of September. I never saw it farther east than on the ridges of the Broad Mountain, about twelve miles from Mauch Chunk; but I have seen it on the Arkansas river, and high up on the Mississippi, as well as along the southern borders of Lake Erie. The young are apt to leave the nest if discovered when unable to fly, and follow their parents through the grass to be fed.

The plant on which a pair of Prairie Warblers are represented, is commonly called buffalo grass, and is found all along the edges of our extensive

Prairie Wood-Warbler

1 Male 2 Female

Buffalo Grass

Drawn from Nature by J.J.Audubon.F.R.S.F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen Philad.ª

Blue Mountain Warbler.

Male.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S.

Lith.ed Printed & Col.d by J. T. Bowen, Phila.a

prairies, in the barrens of Kentucky, and in Louisiana, excepting in the swamps, it being more inclined to grow in dry soil and stiff grounds.

PRAIRIE WARBLER, *Sylvia minuta*, Wils. Amer. Orn., vol. iii. p. 87.
SYLVIA DISCOLOR, Bonap. Syn., p. 83.
PRAIRIE WARBLER, *Sylvia discolor*, Nutt. Man., vol. i. p. 294.
PRAIRIE WARBLER, *Sylvia discolor*, Aud. Orn. Biog., vol. i. p. 76.

Wings rather short, with the outer four quills nearly equal, the second and third longest; tail emarginate and rounded. Male with the upper parts yellowish-green, the back spotted with chestnut-red; lower parts, and a band over the eye, bright yellow; two bands of dull yellow on the wing; outer four tail-feathers with a white patch on the inner web; a small streak before and behind the eye, one on the cheek, a spot on the side of the neck, and oblong markings on the sides, black. Female similar, but paler, especially beneath, and without the black streaks on the side of the head.

Male, 5, 7.

From Texas to Massachusetts. Migratory. Abundant.

BLUE-MOUNTAIN WARBLER.

SYLVICOLA MONTANA, *Wils.*

PLATE XCVIII.—MALE.

It is somewhat strange, that among the numerous species of birds that visit the United States, a few should have been met with only in rare instances. The present Warbler is in this predicament, as it does not appear that many specimens have been obtained excepting that from which this figure and description were taken. For many years I never met with Bewick's Wren, which is now, however, known to be abundant on the mountains of Virginia, and elsewhere in our Middle and Southern Districts, and still more so along the Columbia river. The same was the case with Henslow's Bunting, which has become a common bird in the State of New Jersey, where it breeds, and in South Carolina and the Floridas, where it spends the winter. Of Townsend's Bunting the only specimen as yet procured is in my possession; and

it is only of late years that Macgillivray's Finch has appeared in numbers in the neighbourhood of Charleston. Swainson's Warbler, at one time scarce in South Carolina, where it was discovered by my good friend Dr. BACHMAN, has since been procured as far eastward as the vicinity of Boston by THOMAS M. BREWER, Junr., Esq. The Pipirie Flycatcher was not known to exist eastward of the Floridas until after I had found it there, although now it is not a scarce species, being found breeding in the very heart of the city of Charleston. Traill's Flycatcher, which I first discovered on the Arkansaw river, is now known to abound on the Columbia river. No other person has observed the Rocky Mountain Wren in any part of the country eastward of that great chain besides Dr. BACHMAN, who shot one within a few miles of Charleston. I might mention several other species, which at one time were extremely rare in the United States, but are now abundant in many of our districts; but prefer returning to the Blue-Mountain Warbler, which it has not been my good fortune to meet with, although it would be in no degree surprising to find it a constant visiter to some portions of our vast country yet untrodden by the ornithologist. My figure was taken from a specimen lent to me by the Council of the Zoological Society of London, and which had come from California.

ALEXANDER WILSON, to whom we are indebted for our knowledge of this pretty bird, says that it "was first discovered near that celebrated ridge, or range of mountains, with whose name I have honoured it. Several of these solitary Warblers remain yet to be gleaned up from the airy heights of our alpine scenery, as well as from the recesses of our swamps and morasses, whither it is my design to pursue them by every opportunity. Some of these, I believe, rarely or never visit the lower cultivated parts of the country, but seem only at home among the gloom and silence of those dreary solitudes. The present species seems of that family, or subdivision, of the Warblers, that approach the Flycatchers, darting after flies wherever they see them, and also searching with great activity among the leaves. Its song was a feeble screep, three or four times repeated.

"This species is four inches and three-quarters in length; the upper parts a rich yellow-olive; front, cheeks, and chin yellow; also the sides of the neck; breast and belly pale yellow, streaked with black or dusky; vent plain pale yellow; wings black; first and second row of coverts broadly tipped with pale yellowish-white, tertials the same; the rest of the quills edged with whitish; tail black, handsomely rounded, edged with pale olive; the two exterior feathers on each side white on the inner vanes from the middle to the tips, and edged on the outer side with white; bill dark brown, legs and feet purple-brown; soles yellow; eye dark hazel.

"This was a male. The female I have never seen."

Connecticut Warbler.

1. Male. 2. Female.

Gentiana Saponaria.

Drawn from Nature by J.J. Audubon, F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Phila.a

BLUE-MOUNTAIN WARBLER, *Sylvia montana*, Wils. Amer. Orn., vol. v. p. 113.
SYLVIA TIGRINA, Bonap. Syn., p. 83; but not of Gmelin or Latham, as the figure of Edwards, to which reference is made, has the tail not rounded, but emarginate.
BLUE-MOUNTAIN WARBLER, *Sylvicola montana*, Nutt. Man., 2nd ed., p. 442.
BLUE-MOUNTAIN WARBLER, *Sylvia montana*, Aud. Orn. Biog., vol. v. p. 294.

No bristles at the base of the bill; wings rather short, the third and fourth quills longest; tail much rounded. Upper parts light greenish-olive; a band across the forehead, one over the eye, the cheeks, throat, fore part and sides of neck bright yellow; the rest of the lower parts yellowish-white; the sides marked with narrow longitudinal dusky streaks; wings dusky brown, all the feathers edged with yellowish-white, the secondary quills more broadly, the first row of small coverts and the secondary coverts tipped with white, forming two conspicuous bands; tail brownish-black, the feathers edged with yellowish-green, the two outer on each side white in their terminal half.

Male, $4\frac{1}{12}$, wing $2\frac{6}{12}$.

Blue Mountains of Virginia, and west of the Rocky Mountains.

CONNECTICUT WOOD-WARBLER.

SYLVICOLA AGILIS, *Wils.*

PLATE XCIX.—MALE AND FEMALE.

I procured the pair represented in the plate, on a fine evening, nearly at sun-set, at the end of August, on the banks of the Delaware river, in New Jersey, a few miles below Camden. When I first observed them, they were hopping and skipping from one low bush to another, and among the tall reeds of the marsh, emitting an often-repeated *tweet* at every move. They were chasing a species of spider which runs nimbly over the water, and which they caught by gliding over it, as a Swallow does when drinking. I followed them for about a hundred yards, when, watching a fair opportunity, I shot both at once. The weather was exceedingly sultry; and although I outlined both by candle-light that evening, and finished the drawing of them next morning by breakfast time, they had at that early hour become putrid, so that their skins could not be preserved. On opening them I counted upwards of fifty of the spiders mentioned above, but found no appearance of

any other food. The sexual distinction was very apparent, and the brace proved a pair. They were not in the least shy, and in fact seemed to take very little notice of me, although at times I was quite close to them. These being the only individuals I ever met with, I am of course unable to say where the species breeds, or what are its migrations.

The plant on which they are placed grew abundantly on the spot where I procured them; and as they had just alighted on it when I shot them, it being moreover a handsome species, I thought it best to attach it to them.

Wilson's account of this bird is as follows: "This is a new species, first discovered in the State of Connecticut, and twice since met with in the neighbourhood of Philadelphia. The different specimens I have shot correspond very nearly in their markings; two of these were males, and the other undetermined, but conjectured also to be a male. It was found in every case among low thickets, but seemed more than commonly active, not remaining for a moment in the same position.

"Length five inches and three quarters; extent eight inches; whole upper parts a rich yellow-olive; wings dusky brown, edged with olive; throat dirty white or pale ash; upper part of the breast dull greenish-yellow; rest of the lower parts a pure rich yellow; legs long, slender, and of a pale flesh-colour; round the eye a narrow ring of yellowish-white; upper mandible pale brown, lower whitish; eye dark hazel.

"Since writing the above, I have shot two specimens of a bird, which in every particular agrees with the above, except in having the throat of a dull buff-colour, instead of a pale ash. Both of these were females; and I have little doubt but they were of the same species with the present, as their peculiar activity seemed exactly similar to the males above described."

The males thus described by Wilson, however, I am inclined to think were young birds in their second plumage.

This species forms a connecting link between *Sylvicola* and *Trichas*, having the long pointed wings of the former, and the general appearance of the latter, which it resembles, especially in its tail, which is neither emarginate nor marked with the white spots seen on that of almost all the other Sylvicolæ, but which do not exist in the genus Trichas. Some of the Sylvicolæ are, in like manner, assimilated to Myiodoctes, and others to Vermivora. Of the former may be mentioned, *Sylvicola Audubonii* and *S. coronata;* of the latter, *S. Blackburniæ.*

Connecticut Warbler, *Sylvia agilis*, Wils. Amer. Orn., vol. v. p. 64.
Sylvia agilis, Bonap. Syn., p. 84.
Connecticut Warbler, *Sylvia agilis*, Nutt. Man., vol. i. p. 399.
Connecticut Warbler, *Sylvia agilis*, Aud. Orn. Biog., vol. ii. p. 227; vol. v. p. 81.

Wings long, with the first quill longest, and exceeding the first secondary by eleven-twelfths of an inch; middle toe and claw longer than the tarsus; tail of moderate length, nearly even, with acuminate feathers. Male olive-green above; a ring of yellowish-white round the eye; the head, neck all around, and part of the breast ash-grey, the sides greyish-green; the rest of the lower parts bright yellow. Female olive-green above, yellow beneath, the sides of the neck and a band across the breast tinged with brown.

Male, $5\frac{3}{4}$, 8.

New Jersey, Pennsylvania, and Connecticut. Very rare. Migratory.

GENTIANA SAPONARIA, *Willd.* Sp. Pl., vol. i. p. 1388. *Pursch*, Flor. Amer. Sept., vol. i. p. 185.—PENTANDRIA DIGYNIA, *Linn.*—GENTIANEÆ, *Juss.*

Stem round, smooth; leaves oblongo-lanceolate, three nerved; flowers sessile, tufted, terminal and axillar; corolla quinquefid, campanulate, ventricose, with the divisions obtuse, the internal plaits with toothed segments. It grows in meadows and woods, from Canada to Carolina, flowering in August and September.

GENUS III.—TRICHAS, *Swains.* GROUND-WARBLER.

Bill of moderate length, similar in form to that of Sylvicola, differing only in being a little decurved. The general form does not differ materially from that of Sylvicola, the head being ovate and of moderate size, the neck short, the body rather slender; the feet of moderate length, slender; tarsus slender, much compressed, longer than the middle toe with its claw, anteriorly covered with eight scutella, of which the upper are blended; toes of moderate size, hind toe proportionally large, lateral toes equal, fourth adherent at the base; claws rather long, arched, much compressed, laterally grooved, very acute. Plumage soft and blended. Wings rather short, convex, considerably rounded, the third and fourth quills longest, the fifth little shorter. Tail of moderate length, rounded, always plain, or without white spots.

MACGILLIVRAY'S GROUND-WARBLER.

TRICHAS MACGILLIVRAYI, *Aud.*

PLATE C.—MALE AND FEMALE.

When I first saw the specimens of this bird, which had been transmitted by Mr. TOWNSEND to the Academy of Natural Sciences of Philadelphia, I considered them as identical with *Sylvia Philadelphia* of WILSON; but on subsequently comparing them with a number of individuals of the latter species, procured by my friend EDWARD HARRIS, Esq. in our Middle and Eastern Districts, I found differences sufficient to indicate their being specifically distinct. In consequence of which I have dedicated this pretty little bird to my excellent friend WILLIAM MACGILLIVRAY, Esq. and feel much pleasure in introducing it to the notice of the ornithological world, under a name which I trust will endure as long as the species itself.

Mr. TOWNSEND, who found it on the banks of the Columbia, states that it is "mostly solitary and extremely wary, keeping chiefly in the most impenetrable thickets, and gliding through them in a cautious and suspicious manner. It may, however, sometimes be seen towards mid-day perched upon a dead twig over its favourite places of concealment, and at such times warbles a very sprightly and pleasant little song, raising its head until its bill is almost vertical, swelling its throat in the manner of its relatives."

Mr. NUTTALL has also favoured me with the following interesting account of it.—"This species is one of the most common summer residents of the woods and plains of the Columbia, appearing early in May, and remaining until the approach of winter. After the manner of the Maryland Yellow-throat, it keeps near the ground in low bushes, where it gleans its subsistence. When surprised or closely observed, it is shy and jealous, immediately skulking off, and sometimes uttering a loud snapping clink. Its note has occasionally the hurried rattling sound of *Turdus aurocapillus*, resembling *t'tsh t'tsh ttsh tsheetee*, alternately into *tsh tsh tsh teet shee*. Another male, on the skirts of a thicket, called out at short intervals *vish vishtyu*, changing to *vit vit vit vityu* and *vit vit vityu*, sometimes, when appproached, dropping his voice, and abbreviating his song. Another had a call of *visht visht, visht e visht t'shew*, and *visht visht vishteshew* or *vititshee*. On the 12th of June, a nest of this species was brought to me, containing two young birds nearly quite fledged, in the garb of the mother, pale yellow

Macgillivray's Ground Warbler.

1 Male 2 Female.

beneath, and brightish yellow-olive above. The nest was chiefly made of stripes of the inner scaly bark of probably the white cedar, *thuya occidentalis*, lined with slender wiry stalks of dry weeds, and concealed near the ground in the dead mossy limbs of a fallen oak, and further partly hidden by a long tuft of *usnea*. It was less artificial than the nest of the Yellow-throat, but of the same general appearance, and concealed in a similar situation, probably in a thicket near the ground. On returning the nest to the place it had been taken from, I had almost immediately the satisfaction of seeing the anxious parents come to feed their charge, and for some days they shewed great anxiety on being approached."

"This," says my friend Mr. HARRIS, "is the Warbler that so closely resembles the *S. Philadelphia*. Mr. TOWNSEND has brought in more specimens, which agree with the others in the very distinctive mark of the white eyelids, with dark spots from the base of the bill to the eyes, and also dark on the front at the root of the upper mandible. I cannot but think it entirely distinct."

This species, as has already been observed, is very intimately allied in form, proportions, colours, and habits with that described by WILSON under the name of "Mourning Warbler, *Sylvia Philadelphia*." His account of the latter is as follows:—"The bird from which the figure in the plate was taken, was shot in the early part of June, on the border of a marsh, within a few miles of Philadelphia. It was flitting from one low bush to another, very busy in search of insects, and had a sprightly and pleasant warbling song, the novelty of which first attracted my attention. I have traversed the same and many such places, every spring and autumn since, in expectation of again meeting with some individual of the species, but without success. I have, however, the satisfaction to say, that the drawing was done with the greatest attention to peculiarity of form, markings, and tint of plumage; and the figure on the plate is a good resemblance to the original."

MACGILLIVRAY'S WARBLER, *Sylvia Macgillivrayi*, Aud. Orn. Biog., vol. v. p. 75.

Wings rather short, the second quill longest, the fourth longer than the first, the tail long, considerably rounded, its feathers rounded; tarsus longer than the middle toe and claw. Male olive-green above; the head, hind part, and sides of the neck bluish-grey; the fore neck and part of the breast greyish-black, lunulated with greyish-white; a black loral band; a conspicuous white spot on each eyelid; the lower parts bright yellow. Female olive-green above, yellow beneath, the sides of the neck and a band across the breast ash-grey.

Male, $5\frac{1}{4}$, $6\frac{1}{2}$. Female, 5, wing $2\frac{4\frac{1}{2}}{1\frac{1}{2}}$.

Columbia river. Common.

MOURNING GROUND-WARBLER.

TRICHAS PHILADELPHIA, *Wils.*

PLATE CI.—MALE.

Although this beautiful species has been met with in various portions of our eastern maritime districts, it cannot be said to be an abundant one; and no one has, as yet, been able to discover its nest. Several of my ornithological friends have supplied me with specimens procured in the neighbourhood of New York, Philadelphia, and in the mountainous parts of Vermont; all these were found during the spring and summer months, none having been seen during the autumn; where, on the contrary, the Connecticut Warbler is plentiful.

The habits of the Mourning Warbler resemble, considerably, those of the Maryland Yellow-throat, and other birds of the genus *trichas*, keeping in low thickets, among the branches of which it hops, as well as on the ground. Its flight also resembles that of the bird above mentioned. So curiously and cautiously does it pass from south to north, and from north to south, that its migratory movements have eluded the most attentive observers. My friend the Rev. JOHN BACHMAN never has seen it in South Carolina; and in one instance only, have I met with it in Louisiana. The figure represents a fine adult male in perfect plumage.

MOURNING WARBLER, *Sylvia Philadelphia*, Wils. Amer. Orn., vol. ii. p. 101.
SYLVIA PHILADELPHIA, Bonap. Syn., p. 85.
MOURNING WARBLER, *Sylvia Philadelphia*, Nutt. Man., vol. i. p. 404.
MOURNING WARBLER, *Sylvia Philadelphia*, Aud. Orn. Biog., vol. v. p. 79.

Bill short, straight, conico-subulate, compressed toward the end, acute; upper mandible with the dorsal line declinate, straight, a little convex at the end, the ridge narrow, the sides convex, the edges direct and overlapping, with a slight notch, the tip narrow; lower mandible with the angle of moderate length and narrow, the dorsal line ascending and slightly convex, the sides rounded, the edges inflected, the tip acute; the gape-line straight. Nostrils basal, lateral, operculate, exposed.

Head of moderate size, ovato-oblong; neck short; body rather slender; feet rather long; tarsus slender, longer than the middle toe, much compressed, covered before with seven scutella, behind with two longitudinal plates

Mourning Ground-Warbler.

Male.

Pheasant's-eye Flos-Adonis.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.ª Printed & Col.ᵈ by J. T. Bowen, Phila.ᵃ

meeting so as to form a thin edge; the lateral toes meeting so as to form a thin edge; the lateral toes nearly equal, the third much longer, and united at the base to the fourth, hind toe stronger and rather large; claws moderately arched, extremely compressed, laterally grooved, acute.

Plumage soft and blended, with little gloss; wings of moderate length, somewhat concave; the second, third, and fourth primaries having the outer web cut out toward the end; the second quill is longest, the third scarcely a quarter of the twelfth of an inch shorter, the fourth half a twelfth shorter than the third, and a quarter of a twelfth shorter than the first; the other primaries slowly graduated, the longest or second being only eight and a half twelfths longer than the first secondary. All the quills, primary as well as secondary, are rounded; and there are only nine primaries. Tail rather long, considerably rounded, the lateral feathers a quarter of an inch shorter than the middle, which are longest; all the feathers rather narrow and obliquely pointed.

Upper mandible brownish-black, its edges in their whole length pale yellowish flesh-colour, as is the lower mandible, which, however, is a little dusky at the end. Iris hazel. Feet and claws flesh-coloured. The upper part of the head, the hind part and sides of the neck, are deep ash-grey, tinged with blue; the back, scapulars, and rump deep olive-green; the wings and tail greyish-brown, the edge of the wing and the outer margin of the first quill bright yellow, the other primaries narrowly edged with greenish-yellow, the secondaries of a paler brown externally, as are the tail-feathers. From the ridge of the upper mandible to the eye is a rather broad band of black, which extends a little way under the eye, but is not nearly so conspicuous as that of the species above described; nor are the eyelids marked with white, their marginal feathers being all dusky grey. The fore part of the neck and a portion of the breast, to the distance of an inch and five-twelfths from the bill, are deep black, with lunulate white markings, each feather being margined with that colour; the white edges of the lower black feathers being extremely narrow leave a crescent of nearly pure black; the breast, abdomen, lower tail-coverts, and lower wing-coverts are bright yellow, the sides of the body yellowish-green.

Length to end of tail 5 inches; "extent of wings 8;" bill along the ridge $\frac{5}{12}$, along the edge of lower mandible $\frac{7}{12}$; wing from flexure $2\frac{7}{12}$; tail $2\frac{1}{12}$; tarsus $\frac{9}{12}$; hind toe $\frac{3}{12}$, its claw $\frac{3}{12}$; middle toe $\frac{6}{12}$, its claw $\frac{2}{12}$.

Flos-Adonis.

Adonis autumnalis, *Linn.*, Sp. Pl., p. 771. *Willd.* Sp. Pl., vol. ii. p. 1304. *Smith.* Engl. Fl., vol. iii. p. 43.—Polyandria Pentagynia, *Linn.*—Ranunculaceæ, *Juss.*

This plant, vulgarly named Pheasant's-eye, grows in Louisiana and Europe in the cornfields. It has an erect, branched stem, with copiously pinnatifid, alternate, sessile, dark green leaves, the segments of which are linear and acute, and deep crimson flowers, having a black spot near the claw of each of the petals, which vary from six to ten.

MARYLAND YELLOW-THROAT.

TRICHAS MARILANDICA, *Linn.*

PLATE CII.—MALE, FEMALE, AND YOUNG MALE.

The notes of this little bird render it more conspicuous than most of its genus, for although they cannot be called very musical, they are far from being unpleasant, and are uttered so frequently during the day, that one, in walking along the briary ranges of the fences, is almost necessarily brought to listen to its *whititítee*, repeated three or four times every five or six minutes, the bird seldom stopping expressly to perform its music, but merely uttering the notes after it has picked an insect from amongst the leaves of the low bushes which it usually inhabits. It then hops a step or two up or down, and begins again.

Although timid, it seldom flies far off at the approach of man, but instantly dives into the thickest parts of its favourite bushes and high grass, where it continues searching for food either along the twigs, or among the dried leaves on the ground, and renews its little song when only a few feet distant.

Its nest is one of those which the Cow Bunting, *Molothrus* (*Icterus*) *pecoris*, selects, in which to deposit one of its eggs, to be hatched by the owners, that bird being similar in this respect to the European Cuckoo. The nest, which is placed on the ground, and partly sunk in it, is now and then covered over in the form of an oven, from which circumstance children name this warbler the *Oven-bird.* It is composed externally of withered leaves and grass, and is lined with hair. The eggs are from four to six, of a white colour, speckled with light brown, and are deposited about the middle of May. Sometimes two broods are reared in a season. I have never observed the egg of the Cow Bunting in the nests of the second brood. It

Maryland Ground-Warbler.

1 Adult Male 2 Young Male 3 Female.

Wild Olive.

Drawn from Nature by J.J.Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Phila.a

is less active in its motions than most birds of the genus, but makes up this deficiency by continued application, it being, to appearance, busily employed during the whole of the day. It does not chase insects by flying after them, but secures them by surprise. Caterpillars and spiders form its principal food.

Although this species is found throughout the Union, the Middle States seem to attract and detain more individuals, during the breeding season, than any others. Very few breed in Louisiana. In Kentucky, however, many breed in the barrens. The neighbourhood of swamps and such places is their favourite ground, but every field provided with briar patches or tall weeds harbours some of them. It leaves the Central Districts about the middle of September. The male bird does not attain its full colouring until the first spring, being for several months of the same tints as the female.

The twig on which the males are seen, is commonly called in Louisiana the *wild olive*. The tree is small, brittle and useless. It bears an acid fruit, which is sometimes employed as a pickle, and eaten when ripe by some people.

This bird was published in my Ornithological Biography erroneously as a new species. Of this I informed my friends Dr. BACHMAN, Mr. HARRIS, and Dr. BREWER; and afterwards the Prince of MUSIGNANO. I have nothing to add to my account of its habits. It was found on the Columbia river by Mr. TOWNSEND, several of whose specimens I have seen. I also found it in the Texas in April. No mention is made of it in the Fauna Boreali-Americana; and I saw none in Labrador or Newfoundland. The eggs of this species measure $5\frac{1}{2}$ eighths in length, by four and a half eighths, and are rather pointed at the small end.

The roof of the mouth is flat, posteriorly with two ridges, anteriorly with a middle prominent and two very slight lateral ridges; its width 3 twelfths. The tongue is $4\frac{1}{2}$ twelfths long, sagittate and papillate at the base, thin, concave above, tapering to a deeply slit and slightly lacerated point. The œsophagus is 1 inch 7 twelfths long, its greatest width 2 twelfths. The stomach is rather small, elliptical, $4\frac{1}{2}$ twelfths long, $3\frac{1}{2}$ twelfths broad; its lateral muscles moderate, the lower very thin; the epithelium longitudinally rugous. The intestine is 5 inches long, its greatest width 1 twelfth; the cœca 1 twelfth long, and about a third of a twelfth wide, their distance from the extremity 7 twelfths.

The trachea is $1\frac{1}{4}$ inches long, 1 twelfth broad at the top; its rings 60; its muscles as usual. Bronchial rings 15.

MARYLAND YELLOW-THROAT, *Sylvia Marilandica*, Wils. Amer. Orn., vol. i. p. 88, Male; vol. ii. p. 163, Female.

SYLVIA MARILANDICA, Bonap. Syn., p. 85.

MARYLAND YELLOW-THROAT, Nutt. Man., vol. i.
YELLOW-BREASTED WARBLER, or MARYLAND YELLOW-THROAT, *Sylvia Trichas*, Aud. Orn. Biog., vol. i. p. 121, Adult; vol. v. p. 463.
ROSCOE'S YELLOW-THROAT, *Sylvia Roscoe*, Aud. Orn. Biog., vol. i. p. 124. Young.

Adult Male.

Bill of ordinary length, tapering, slender, nearly straight, acute. Nostrils basal, lateral, elliptical, half-closed by a membrane. Head and neck of ordinary size, the latter short. Body rather short. Feet longish, slender; tarsus longer than the middle toe, covered anteriorly with a few scutella, the uppermost long; toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, acute, arched.

Plumage loose, blended. Wings very short, the first quill longest. Tail rounded.

Bill dark brown. Iris dark hazel. Feet flesh colour. A broad band of black across the forehead, including the eyes, and terminating in a pointed form half-way down the neck; behind which is a narrower band of very pale blue; a slender white streak under the eye. Fore part of the neck bright ochre-yellow, the rest of the under parts pale brownish-yellow, fading into white on the abdomen and under tail-coverts. Upper parts dull greyish-olive, on the head tinged with red. Inner webs of the quills deep brown.

Length 5¼ inches, extent of wings 5½; bill along the ridge $\frac{5}{12}$; along the gap $\frac{2}{3}$; tarsus $\frac{11}{12}$.

Adult Female.

The female has the upper parts lighter, the under parts tinged with reddish-brown, and wants the two bands on the head, which is of a pale brownish-red colour.

THE SNOW-DROP TREE, SILVER-BELL TREE, OR WILD OLIVE.

HALESIA TETRAPTERA, *Willd.* Sp. Pl., vol. ii. p. 849. *Pursch*, Flor. Amer., vol. ii. p. 448. MONADELPHIA DECANDRIA, *Linn.*—GUAIACANÆ, *Juss.*

Leaves ovate, acuminate, serrate; flowers with twelve stamina; the fruit rhomboidal. It grows in shady woods, generally near rivers.

Delafield's Ground Warbler

Male

Drawn from Nature by J.J. Audubon FRSFLS.

Lith.d Printed & Col.d by J.T. Bowen Philad.a

DELAFIELD'S GROUND-WARBLER.

TRICHAS DELAFIELDII, *Aud.*

PLATE CIII.—MALE.

This beautiful little bird I named in honour of Colonel DELAFIELD, President of the Lyceum of Natural History in the city of New York, a gentleman distinguished by his scientific attainments, not less than by those accomplishments and virtues which tend to improve and adorn society. It so much resembles the Maryland Yellow-throat, (*Trichas Marilandica,*) *Sylvia Trichas* of the older authors, *Trichas personatus* of SWAINSON, that one might readily confound the two species. The differences between them will be easily seen on comparing their descriptions. The only specimen in my possession was obtained from Mr. TOWNSEND, who procured it in California.

DELAFIELD'S YELLOW-THROAT, *Sylvia Delafieldii*, Aud. Orn. Biog., vol. v. p. 307.

Bill longish, nearly straight, conico-subulate, rather broader than high at the base, compressed toward the end, acute; upper mandible with the dorsal line declinato-convex, the ridge narrow, the sides convex, the edges direct and overlapping, with a very slight notch, the tip narrow; lower mandible with the angle of moderate length and narrow, the dorsal line ascending and straight, the sides rounded, the edges inflected, the tip acute; the gape-line considerably arched. Nostrils basal, lateral, oblong, operculate, exposed.

Head of moderate size, ovate; neck short; body moderately stout. Feet rather long, tarsus slender, longer than the middle toe, much compressed, covered anteriorly with seven scutella, behind with two longitudinal plates meeting so as to form a thin edge; the lateral toes nearly equal, the third much longer, and united at the base to the fourth, the hind toe large; claws moderately arched, extremely compressed, with the sides faintly grooved, acute.

Plumage soft and blended with little gloss. Wings rather long, somewhat concave; the second, third, and fourth primaries have the outer web cut out towards the end; the first quill is three and a half twelfths shorter than the second, which is two-twelfths shorter than the third; the latter is longest, but scarcely exceeds the fourth, and the fifth is only a quarter of a twelfth

shorter than it; the other primaries very slowly graduated, the longest or third being only five-twelfths longer than the first secondary; all the quills are rounded. Tail rather long, straight, much rounded, the lateral feathers being half an inch shorter than the middle.

Upper mandible blackish-brown, with the edges yellowish flesh-colour; lower mandible of the latter colour, slightly dusky at the point. A band of black passes across the forehead, includes the loral space and eyes, and terminates on the ear-coverts. The upper part of the head is light greyish-blue, tinged behind with green; the rest of the upper parts dull greyish-olive; the quills and tail-feathers wood-brown, the edge of the wing, and the margin of the outer primary, yellow. The fore part of the neck, and all the lower parts, rich yellow, excepting the sides, which are shaded into dull yellowish-green, and the lower wing-coverts and axillaries, which are nearly white.

Length to end of tail $5\frac{1}{4}$ inches; bill along the ridge $\frac{6\frac{1}{2}}{12}$, along the edge of lower mandible $\frac{8}{12}$; wing from flexure $2\frac{5}{12}$; tail $2\frac{1}{2}$; tarsus $\frac{11}{12}$; hind toe $\frac{4\frac{1}{2}}{12}$, its claw $\frac{4\frac{1}{2}}{12}$; middle toe $\frac{7\frac{1}{2}}{12}$, its claw $\frac{3}{12}$.

This species has the bill much stronger and more elongated than *Trichas Marilandica;* its wings are much more rounded, the first quill being nearly five-twelfths shorter than the third, whereas in the latter it is scarcely a twelfth and a half shorter; its tail is more rounded; and its tarsi and toes are proportionally larger. The colours are, however, similar; but the present species has no whitish band margining the black band on the head, and this latter band is much narrower in front, and does not proceed so far down the neck, extending only to the distance of four and a half twelfths from the eye, whereas in *T. Marilandica* it extends to the distance of half an inch.

GENUS IV.—HELINAIA, *Aud.* SWAMP-WARBLERS.

Bill rather long, being nearly of the same length as the head, straight, or slightly decurved, tapering to a very acute point, much compressed; the upper mandible with the ridge distinct, the sides declinate and flat at the base, the edges somewhat inflected beyond the middle, the notch obsolete; lower mandible with the dorsal line straight, the edges involute, the tip extremely acute. Nostrils oblong; exposed. Feet of moderate length; tarsus about equal to the middle toe and claw, slender, much compressed, with the

Swainson's Swamp Warbler &

Male.

Orange coloured Azalea. Azalea calendulacea.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.ed Printed & Col.d by J.T.Bowen. Phila.a

upper scutella blended; toes slender; claws rather long, moderately arched, slender, much compressed, laterally grooved, extremely acute; plumage soft and blended. Bristles obsolete. Wings rather long, somewhat pointed, the outer three nearly equal, the second longest. Tail of moderate length, nearly even.—Name from Ἕλος, a swamp, and Ναίω, to inhabit.

SWAINSON'S SWAMP-WARBLER.

HELINAIA SWAINSONII, *Aud.*

PLATE CIV.—MALE.

Shortly after the death of WILSON, one of the wise men of a certain city in the United States, assured the members of a Natural History Society there, that no more birds would be found in the country than had been described by that justly celebrated writer. Had the assertions however been made in the hearing of that ornithologist, he would doubtless at once have refuted the speech of this *extraordinary* orator, who continued as follows:—"No more Finches, no more Hawks, no more Owls, no more Herons, and certainly no more Pigeons; and as to Water birds, let the list given by WILSON of such as he has not described be filled, and again I say, there will end the American Ornithology." The author has travelled much, having gone a few miles to the eastward of his own city, and even crossed the Mississippi; but, as he had predicted, *he* never discovered a bird in all his wanderings. Time passed on, and the orator has dreamed over it; but several industrious students of nature, doubting if all that he had said might really be strictly correct to the letter, have followed in the track of WILSON, have extended their investigations, ransacked the deep recesses of the forests and the great western plains, visited the shores of the Atlantic, ascended our noble streams, and explored our broadest lakes;—and, reader, they have found more new birds than the learned academician probably knew of old ones. Then, be not surprised when I assure you that our BONAPARTES, our NUTTALLS, our BACHMANS, our COOPERS, PICKERINGS, TOWNSENDS, PEALES, and other zealous naturalists, have very considerably augmented the Fauna of the United States. To the list of these amiable men may be added the names of learned and enterprising Europeans—PARRY, FRANKLIN, RICHARDSON, ROSS,

DRUMMOND, and others, who with a zeal equalled only by that of WILSON himself, have crossed the broad Atlantic, and made discoveries in ornithology in portions of North America never before visited, in which they have met with species that, although previously unknown to us, have since been found to traverse the whole extent of our wide territories. Then, reader, will you not agree with me in believing that even now, discoveries remain to be made in a region so vast that no individual, whatever might have been his exertions, could truly say of it that he had explored it all?

The bird represented in the plate before you was discovered by my friend JOHN BACHMAN, near Charleston in South Carolina, while I was in another part of our continent, searching for the knowledge necessary to render my ornithological biographies as interesting as possible to you:—it was in the spring of 1832, when I was rambling over the rugged country of Labrador, that my southern friend found the first specimen of this bird, near the banks of the Edisto river. I have been favoured by him with the following account of it.

"I was first attracted by the novelty of its notes, four or five in number, repeated at intervals of five or six minutes apart. These notes were loud, clear, and more like a whistle than a song. They resembled the sounds of some extraordinary ventriloquist in such a degree, that I supposed the bird much farther from me than it really was; for after some trouble caused by these fictitious notes, I perceived it near to me, and soon shot it.

"The form of its bill I observed at once to differ from all other known birds of our country, and was pleased at its discovery. On dissection it proved to be a male, and in the course of the same spring, I obtained two other males, of which the markings were precisely similar. In the middle of August of that year, I saw an old female accompanied with four young. One of the latter I obtained: it did not differ materially from the old ones. Another specimen was sent to me alive, having been caught in a trap. I have invariably found them in swampy muddy places, usually covered with more or less water. The birds which I opened had their gizzards filled with the fragments of coleopterous insects, as well as some small green worms that are found on water plants, such as the pond lily (*Nymphæa odorata*) and the *Nelumbium* (*Cyamus flavicomus*). The manner of this species resemble those of the Prothonotary Warbler, as it skips among the low bushes growing about ponds and other watery places, seldom ascending high trees. It retires southward at the close of summer."

The Azalea and Butterfly accompanying the figure of this species were drawn by my friend's sister, Miss MARTIN, to whom I offer my sincere thanks.

Dr. T. M. BREWER informs me that a specimen of Swainson's Warbler

has been obtained in Massachusetts, by Mr. SAMUEL CABOT. This is the only instance in which it is known to have been procured, or even observed, in that part of the country, where nothing farther has therefore been ascertained respecting its history.

The species to which this approaches nearest is the *Sylvia vermivora.* The bird, however, is very closely allied to the Wrens, which it greatly resembles in the form of its bill and feet, although in the form of its wings it differs essentially.

To none of my ornithological friends could I assuredly with more propriety have dedicated this species than to him, the excellent and learned author, whose name you have seen connected with it—to him, who has himself traversed large portions of America, who has added so considerably to the list of known species of birds, and who has enriched the science of ornithology by so many valuable works.

SWAINSON'S WARBLER, *Sylvia Swainsonii*, Aud. Orn. Biog., vol. ii. p. 563; vol. v. p. 462.

Adult.

Bill as long as the head, slender, straight, tapering to a point, much compressed, the ridge rather sharp, the sides of the upper mandible at the base declinate and flat, the edges inflected. Nostrils basal, lateral, oblong, half filled above by a cartilaginous membrane. The form is slender and graceful. Feet of ordinary length, slender; tarsus compressed, anteriorly covered with a few long scutella, posteriorly sharp, longer than the middle toe; toes free, but the outer united to the second joint; claws arched, very slender, very acute, extremely compressed, with a lateral groove, the hind claw much larger.

Plumage soft, blended, slightly glossed. Wings longish, the first three quills almost equal, the first being very slightly shorter, secondaries narrow and rounded. Tail of ordinary length, straight, even, of twelve rather narrow rounded feathers.

Bill light brown, darker at the tip. Iris brown. Feet and claws flesh-coloured. The colouring of the plumage is extremely simple, the whole of the upper parts being of a rich brown, tinged with red on the head, while the under parts are very pale brownish-grey, the sides darker. The sides of the head are brownish-white, the feathers tipped with brown, and a whitish line passes over the eye.

Length $5\frac{1}{4}$, extent of wings $8\frac{1}{2}$; bill along the ridge $\frac{7}{12}$, along the edges $\frac{9}{12}$; tarsus $\frac{7}{12}$, middle toe including the nail $\frac{3}{4}$.

THE ORANGE-COLOURED AZALEA.

AZALEA CALENDULACEA, *Mich.*, Flor. Amer., vol. i. p. 151. *Pursch*, Fl. Amer. Sept., vol. i. p. 151.—PENTANDRIA MONOGYNIA, *Linn.*

Leaves oblong or lanceolate, downy on both sides; flowers large, not viscous, of a deep orange colour, the hairy tube of the corolla shorter than its segments. It is a native of Georgia.

THE WORM-EATING SWAMP-WARBLER.

HELINAIA VERMIVORA, *Lath.*

PLATE CV.—MALE AND FEMALE.

The nest of this active little bird is formed of singular materials, being composed externally of dried mosses and the green blossoms of hickories and chestnut-trees, while the interior is prettily lined with fine fibrous roots, the whole apparently rather small for the size of the occupants. About the middle of May the female lays four or five eggs, which are cream-coloured, with a few dark red spots near the larger end, leaving a circular unspotted part at the extremity. The nest is usually placed between two small twigs of a bush, not more than eight or nine feet from the ground, and sometimes only four or five.

The flight of the Worm-eating Warbler resembles that of the Crested Titmouse, being of short duration, and accompanied with the same rustling noise, which is occasioned by the rather concave formation of their wings.

It merely passes through Louisiana in spring, appearing there as early as the beginning of April, and extends its migrations to the borders of Lake Erie, where I shot several in autumn. It is probable that it proceeds farther north. It returns through Louisiana about the end of October, only remaining a few days on its passage.

It is an inhabitant of the interior of the forests, and is seldom found on the borders of roads or in the fields. In spring they move in pairs, and, during their retrograde marches, in little groups, consisting each of a family, seven or eight in number; on which account I am inclined to believe that

Worm-eating Swamp Warbler.

1 Male 2 Female

American Poke-weed Phytolacca decandra

Drawn from Nature by J.J. Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Philad.a

they raise only a single brood in the year. They are ever amongst the decayed branches of trees or other plants, such as are accidentally broken off by the wind, and are there seen searching for insects or caterpillars. They also resort to the ground, and turn over the dried leaves in quest of the same kind of food. They are unsuspecting, and will suffer a person to approach within a few paces. When disturbed, they fly off to some place where withered leaves are seen. They have only a few weak notes, which do not deserve the name of song. Their industry, however, atones for this defect, as they are seen continually moving about, rustling among the leaves, and scarcely ever removing from one situation to another until after they have made a full inspection of the part in which they have been employed.

This species reaches the Central Atlantic Districts in the middle of May, and breeds there, as well as farther northward. I have found them more numerous in the Jerseys than in any other portion of the Union. In Kentucky and Ohio I have seen only a few of them; nor have I ever found their nests in either of these States.

According to Dr. RICHARDSON, this species visits the Fur Countries, where a single specimen was produced at Cumberland House, on the banks of the Saskatchewan. It is found in the State of Maine, and in the British Provinces of New Brunswick and Nova Scotia, but I did not meet with it farther eastward. None were seen on the Rocky Mountains, or about the Columbia river, by Mr. TOWNSEND. My friend Dr. BACHMAN says that it breeds sparingly in the swamps of Carolina. He observed a pair followed by three or four young ones nearly fledged, all of which already exhibited the markings on the head.

The eggs of this species measure five and a half eighths of an inch in length, and half an inch in breadth; the smaller end is rather rounded; its colour and markings as already described, though I have seen some more copiously marked than others, and the cream-colour of their ground tinged with a rosy hue.

The plant on which you see a pair of Worm-eating Warblers is well known throughout the United States by the name of *pokeberry*. It grows in every situation, from the tops of the most arid mountain-ridges to the lowest and richest valleys; and it is almost impossible to follow a fence for a hundred yards without seeing some of it. Its berries are food for numerous species of our birds, and produce a beautiful dark crimson juice, which is used instead of red ink by some of the country people, although it does not retain its original colour for many days. This plant grows to the height of four or six feet, and is eaten when it first shoots from the ground as a substitute for asparagus, quantities of it being not unfrequently exposed in the markets. The juice of the berries is taken in cases of ague and continued

fever, but requires to be used with judgment, as too large a dose proves deleterious.

The roof of the mouth is flat and slightly arched, posteriorly with two ridges, anteriorly with a middle prominent and two very slight lateral ridges; its width $3\frac{1}{2}$ twelfths. The tongue is 5 twelfths long, emarginate and papillate at the base, narrow, tapering, thin, concave above, the tip rather abrupt, and terminated by several stiffish bristles, like that of a Titmouse. The œsophagus is 1 inch 9 twelfths long, its greatest width 3 twelfths. The stomach is small, elliptical, $5\frac{1}{2}$ twelfths long, $4\frac{1}{2}$ twelfths in breadth; the lateral muscles moderate, the lower very thin; the epithelium longitudinally rugous. The stomach is filled with insects. The intestine is $5\frac{1}{4}$ inches long, from $1\frac{1}{2}$ twelfths to 1 twelfth in width. The cœca are $1\frac{1}{2}$ twelfths long, and $\frac{1}{4}$ twelfth wide; their distance from the extremity 7 twelfths.

The trachea is 1 inch 7 twelfths long, flattened, 1 twelfth broad at the upper part; the rings about 70, moderately firm; bronchial half rings about 15; the muscles as usual.

WORM-EATING WARBLER, *Sylvia vermivora*, Wils. Amer. Orn., vol. iii. p. 74.
SYLVIA VERMIVORA, Bonap. Syn., p. 86.
WORM-EATING WARBLER, *Sylvia vermivora*, Aud. Orn. Biog., vol. i. p. 177; vol. v. p. 460.

Bill longish, nearly straight, rather strong, elongated-conical, as deep as broad at the base, with sharp, nearly straight edges. Nostrils basal, oval, half concealed by the feathers. Head rather large, neck short. Body short and full. Feet of ordinary length, rather slender; tarsus compressed, covered anteriorly with a few long scutella, acute behind, longer than the middle toe; toes scutellate above, free; claws arched, slender, compressed, acute.

Plumage blended, soft and tufty. Wings of ordinary length, considerably curved, the second quill longest, the first little shorter. Tail rather short, a little rounded, of twelve rather narrow, obtuse feathers.

Bill blackish-brown above, greenish-grey beneath. Iris hazel. Feet flesh-colour. General colour of the upper parts deep green, tinged with brown. Head and lower parts light brownish-yellow, the former with four longitudinal black bands, of which one on each side proceeds from the middle of the upper mandible, the other from the inferior angle of its base. The lower part of the neck anteriorly, and the fore part of the breast are more yellow than the rest of the under parts; the abdomen and under tail-coverts nearly white.

Length $5\frac{1}{2}$ inches, extent of wings $8\frac{1}{2}$; bill along the ridge $\frac{7}{12}$, along the gap $\frac{3}{4}$; tarsus $\frac{5}{6}$, middle toe $\frac{3}{4}$.

The female hardly differs from the male in external appearance.

Prothonotary Swamp-Warbler.

1. Male. 2. Female.

Cane Vine.

Drawn from Nature by J.J. Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen Philad.a

THE AMERICAN POKE-WEED.

PHYTOLACCA DECANDRA, *Willd.* Sp. Pl., vol. i. p. 322. *Pursch*, Fl. Amer., vol. i. p. 324. —DECANDRIA DECAGYNIA, *Linn.*—ATRIPLICES, *Juss.*

This species is distinguished by its elliptico-lanceolate leaves, and decandrous flowers, the other species differing in the number of stamina and one of them being diœcious. The berries, which are nearly globular, are disposed in an elongated, pendulous raceme, and are of a purplish-black colour. The flowers are white, their peduncles, partial and general, of a bright carmine-purple colour.

PROTHONOTARY SWAMP-WARBLER.

HELINAIA PROTONOTARIUS, *Lath.*

PLATE CVI.—MALE AND YOUNG.

I never saw this pretty bird in any of our eastern districts, and rarely farther up the Ohio than Louisville, in the neighbourhood of which place it rears its young. Louisiana seems in fact better suited to its habits than any other state, on account of its numerous lakes, creeks and lagoons, overshadowed by large trees, which are favourite places of resort for this species. It is fond of flying over the waters of these creeks and lagoons, and is seldom seen in the interior of the woods. Its flight is rapid, and more steady than is usual in birds of its genus; and as it moves along, the brightness of its colours attracts the eye. On alighting, it moves rapidly along the twigs, partly sidewise, frequently turning about and extending its neck to look under the leaves, from which it picks various kinds of insects. It often perches upon the rank grasses and water plants, in quest of minute molluscous animals which creep upon them, and which, together with small land snails, I have found in its stomach. It does not perform *sorties*, or sally forth after flying insects, as many other Warblers are in the habit of doing. It has a few notes for its song, which possess no interest. The males, when chasing each other, keep up a creaking noise, until the little battle is over, when they perch and balance their body with much grace and liveliness.

I have observed their arrival in Louisiana to take place, according to the state of the weather, from the middle of March to the first of April. At Henderson, in Kentucky, they do not arrive until a month later. They remain until October, but, I am inclined to believe, rear only a single brood in a season. The nest is fixed in the fork of a small twig bending over the water, and is constructed of slender grasses, soft mosses, and fine fibrous roots. The number of eggs is from four to six. I could never ascertain whether the male assists in incubation, as the difference of plumage in the sexes is not perceptible when the bird is at large, and indeed can hardly be traced when one has procured the male and the female for comparison. It cannot be called a plentiful species. To search for them on the high lands, or at any considerable distance from the kind of places above mentioned, would prove quite useless.

Dr. BACHMAN informs me that he has watched this species for hours at a time, when on the borders of streams, and observed it to seize insects on wing by gliding through the air after them, but never heard it click its bill, as is usual with Flycatchers. It breeds in South Carolina, and he saw a pair with four young ones near Charleston, on the 1st of June, 1836.

The plant on which you see these birds, grows in swampy places, but is extremely rare, and I have not been able to procure any scientific appellation for it. In Louisiana, it is called the *cane vine*. It bears a small white flower in clusters. The berries are bitter and nauseous. The stem, which runs up and over trees, resembles that of other climbing plants, is extremely elastic, and as tough as a cord. The leaves, of which you see the form and colour, are also tough and thick.

PROTHONOTARY WARBLER, *Sylvia Protonotarius*, Wils. Amer. Orn., vol. iii. p. 72.
SYLVIA PROTONOTARIUS, Bonap. Syn., p. 86.
PROTHONOTARY WARBLER, *Sylvia Protonotarius*, vol. i. p. 410.
PROTHONOTARY WARBLER, *Sylvia Protonotarius*, Aud. Orn. Biog., vol. i. p. 22; vol. v. p. 460.

Adult Male.

Bill nearly as long as the head, slender, tapering, nearly straight, as deep as broad at the base. Nostrils basal, lateral, elliptical, half closed by a membrane. Head rather small. Neck short. Body rather slender. Feet of ordinary length, slender; tarsus longer than the middle toe, covered anteriorly with a few scutella, the uppermost long: toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, acute, arched.

Plumage soft, blended, tufty. Wings of ordinary length, acute, the first and second quills longest. Tail nearly even, of twelve straight, rather

Golden-winged Swamp-Warbler.

1. Male 2. Female.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.d Printed & Col.d by J.T.Bowen Philad.a

narrow feathers. Bill brownish-black. Iris hazel. Feet and claws greyish-blue. Head all round, neck and under parts generally, of a bright rich pure yellow, paler on the abdomen, and passing into white on the under tail-coverts. Fore part of the back and lesser wing-coverts yellowish-green. Lower back and wings light greyish-blue. Inner webs of the quills blackish. Inner webs of the tail-feathers bluish-grey at the base, then white to near the tip, which is black, as well as the outer webs. The two middle feathers blackish, tinged with greyish-blue.

Length $5\frac{1}{2}$ inches, extent of wings $8\frac{1}{2}$; beak along the ridge $\frac{7}{12}$, along the gap $\frac{3}{4}$; tarsus $\frac{11}{12}$.

Adult Female.

The differences which the female exhibits are so slight as scarcely to be describable, the tints being merely a little duller.

GOLDEN-WINGED SWAMP-WARBLER.

HELINAIA CHRYSOPTERA, *Linn.*

PLATE CVII.—MALE AND FEMALE.

Although I have met with this species entering the United States from the Texas in the month of April, and have procured several specimens in Kentucky and Louisiana, as well as a single one in New Jersey, I never had the good fortune to find its nest. When it first makes its appearance in Louisiana or Kentucky, it usually resorts to the higher branches of trees, where, amid the opening leaflets and blossoms, it actively searches for its insect food, occasionally following its prey on wing to some distance, and moving by short leaps among the twigs, in the manner of *Helinaia carbonata*, which, in its elongated and slender shape, it in some measure resembles. The flight of this species is, unlike that of the Cape May Warbler, *Sylvicola maritima*, elevated, swift, and irregularly undulated, until it is about to alight, when it dives toward the spot selected by it, as most Warblers are wont to do. I never saw a bird of this species in autumn, and therefore infer that its southward journey must be accomplished in a very secret and careful manner, or by night. A male and a female are figured in their perfect spring plumage.

GOLDEN-WINGED WARBLER, *Sylvia crysoptera*, Wils. Amer. Orn., vol. ii. p. 113.
SYLVIA CHRYSOPTERA, Bonap. Syn., p. 87.
GOLDEN-WINGED WARBLER, *Sylvia chrysoptera*, Nutt. Man., vol. i. p. 411.
GOLDEN-WINGED WARBLER, *Sylvia chrysoptera*, Aud. Orn. Biog., vol. v. p. 154.

Male in spring.

Bill shorter than the head, slender, conical, compressed toward the end, tapering to an acute point; upper mandible with the dorsal line almost perfectly straight, being very slightly convex toward the end, the ridge narrow, the sides sloping at the base, rounded toward the end, the edges a little inflected, without notch, the tip acuminate; nostrils basal, oblong, operculate; lower mandible with the angle rather short and obtuse, the dorsal line straight, the sides convex, the edges inflected, the tip acuminate, the gape-line nearly straight.

Head of moderate size, ovate; neck rather short; body slender. Feet of moderate length, slender; tarsus longer than the middle toe, much compressed, covered anteriorly by seven scutella, posteriorly by two plates meeting so as to form a very thin edge; toes small, much compressed; hind toe comparatively large, lateral toes nearly equal, middle toe much longer; claws moderate, well curved, much compressed, laterally grooved, acute.

Plumage very soft and blended. Wings of moderate length, the second quill longest, the third scarcely shorter, the first and fourth about equal, the first with the outer web narrowed in its whole length, the next three toward the end; secondaries long, rather narrow, rounded. Tail rather long, nearly even, the middle feathers being scarcely a twelfth of an inch shorter than the lateral.

Bill and feet black; iris brown. The general colour of the upper parts is light ash-grey, of the lower white; the upper part of the head, and a patch on the wing, formed by the first row of small coverts and the secondary coverts, bright yellow; a band from the bill to the eye, continued under it, and enlarging behind, so as to include the ear-coverts, together with the throat, to the extent of about an inch, black; a white band from over the eyes to behind the ears, and another from the lower mandible down the side of the neck, enlarging as it proceeds; the sides under the wings very pale ash-grey. The quills and tail-feathers are brown, edged with ash-grey; the outer three feathers of the tail have a large portion of the inner web white.

Length to end of tail $4\frac{1}{4}$ inches, to end of wings $3\frac{7}{8}$; extent of wings $7\frac{5}{8}$; bill along the ridge $\frac{5}{12}$, along the edge of lower mandible $\frac{7}{12}$; wing from flexure $2\frac{8}{12}$; tail $2\frac{1}{4}$; tarsus $\frac{9}{12}$; hind toe $\frac{3}{12}$, its claw $\frac{3}{12}$, middle toe $\frac{5}{12}$, its claw $\frac{2}{12}$.

Adult Female.

The female resembles the male, but has the tints less bright, the sides of

Bachman's Swamp Warbler.

1 Male 2 Female.

Gordonia pubescens?

Drawn from Nature by J.J.Audubon F.R.S.F.L.S. Lith.ed Printed & Col.d by J.T.Bowen Phila.a

the head and the throat grey instead of black, and the white bands on the head narrower and less extended.

Length to end of tail 4 inches, to end of wings $3\frac{5}{8}$; extent of wings $7\frac{1}{4}$.

BACHMAN'S SWAMP-WARBLER.

HELINAIA BACHMANII, *Aud.*

PLATE CVIII.—MALE AND FEMALE.

My friend BACHMAN has the merit of having discovered this pretty little species of Warbler, and to him I have the pleasure of acknowledging my obligations for the pair which you will find represented in the plate, accompanied with a figure of one of the most beautiful of our southern flowers, originally drawn by my friend's sister, Miss MARTIN. I myself have never had the good fortune to meet with any individuals of this interesting Sylvia, respecting which little is as yet known, its discoverer having only procured a few specimens of both sexes, without being able to find a nest. The first obtained was found by him a few miles from Charleston, in South Carolina, in July 1833, while I was rambling over the crags of Labrador. According to my amiable friend, it was "a lively active bird, gliding among the branches of thick bushes, occasionally mounting on the wing and seizing insects in the air in the manner of a Flycatcher. It was an old female that had to all appearance just reared a brood of young." Shortly after, several were seen in the same neighbourhood; and we may still expect an account of its manners, migration, and breeding, although not yet discovered.

BACHMAN'S WARBLER, *Sylvia Bachmanii*, Aud. Orn. Biog., vol. ii. p. 483.

Adult Male.

Bill rather long, slightly bent towards the tip, subulato-conical, extremely acute, the edges sharp and inflected. Nostrils basal, lateral, elliptical, half-closed above by an arched membrane. The general form slender. Feet of ordinary length; tarsus slender, compressed, anteriorly scutellate, sharp behind; toes free, the hind toe strong, the two lateral nearly equal, the middle one much longer; claws slender, arched, compressed, acute.

Plumage soft and blended, slightly glossed. Wings of moderate length, the first four quills nearly equal, the second longest; the second, third, and fourth slightly cut out on the outer edge towards the end; the secondaries long and rounded. Tail of ordinary length, slightly emarginate.

Bill dusky brown above, light blue beneath. Iris dark brown. Feet umber. The general colour of the upper parts is brownish-olive, the rump yellowish-green, the feathers of the crown brownish-black in the centre; the forehead, a line over the eye, the cheeks, the chin, the sides of the neck, the flexure of the wing, lower wing-coverts, and breast, yellow; the sides greenish-grey, the lower tail-coverts white. On the fore part of the neck is a large patch of black, enlarging beneath. Quills and tail wood-brown, narrowly margined with whitish; a large white spot on the inner web of each of the tail-feathers, excepting the two middle ones.

Length $4\frac{1}{12}$ inches, extent of wings $6\frac{1}{4}$; bill along the ridge $\frac{5}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{8}{12}$.

Adult Female.

The female is considerably smaller than the male, and differs only in having the tints fainter, the forehead yellowish-green, and the fore-neck dusky.

Length $3\frac{10}{12}$.

GORDONIA PUBESCENS, *Willd.* Sp. Pl., vol. iii. p. 841. *Pursch*, Fl. Amer. Sept., vol. ii. p. 451.—MONADELPHIA POLYANDRIA, *Linn.*—MALVACEÆ, *Juss.*

This beautiful tree, which grows in Georgia, seldom attains a height of more than fifteen feet. Its leaves are obovato-lanceolate, deep green, downy beneath, and its large white flowers, with their numerous yellow anthers, have a very beautiful appearance.

Carbonated Swamp Warbler.

Males.

May-bush or Service Pyrus Botryapium.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Philad.a

CARBONATED SWAMP-WARBLER.

HELINAIA CARBONATA, *Aud.*

PLATE CIX.—MALES.

I shot the two little birds here represented, near the village of Henderson, in the State of Kentucky, in May 1811. They were both busily engaged in searching for insects along the branches and amongst the leaves of a dogwood tree. Their motions were those common to all the species of the genus. On examination, they were found to be both males. I am of opinion that they were each young birds of the preceding year, and not in full plumage, as they had no part of their dress seemingly complete, excepting the head. Not having met with any other individuals of the species, I am at this moment unable to say any thing more about them. They were drawn, like almost all the other birds which I have represented, immediately after being killed; but the branch on which you see them was not added until the following summer.

The common name of this plant is *service-tree.* It seldom attains a greater height than thirty or forty feet, and is usually found in hilly ground of secondary quality. The berries are agreeable to the taste, and are sought after by many species of birds, amongst which the Red-headed Woodpecker is very conspicuous.

Young Male.

Bill of ordinary length, nearly straight, subulato-conical, acute, nearly as deep as broad at the base, the edges acute, the gap-line slightly deflected at the base. Nostrils basal, lateral, elliptical, half-closed by a membrane. Head rather small. Neck short. Body slender. Feet of ordinary length, slender; tarsus longer than the middle toe, covered anteriorly by a few scutella, acutely-edged behind; toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, acute, arched.

Plumage soft, blended, tufty. Wings of ordinary length, acute, the second quill longest. Tail short, notched.

CARBONATED WARBLER, *Sylvia carbonata,* Aud. Orn. Biog., vol. i. p. 308.

Bill brownish-black above, light blue beneath. Iris hazel. Feet light flesh-colour. Upper part of the head black. Fore part of the back, lesser

wing-coverts and sides dusky, spotted with black. Lower back dull yellowish-green, as is the tail, of which the outer web of the outer feather is whitish. Tips of the second row of coverts white, of the first row yellow; quills dusky, their outer webs tinged with yellow. A line from the lore over the eye, sides of the neck, and the throat, bright yellow. A dusky line behind the eye. The rest of the under parts dull yellow, excepting the sides.

Length $4\frac{3}{4}$ inches; bill along the ridge $\frac{5}{12}$, along the gap $\frac{7}{12}$; tarsus $\frac{3}{4}$.

The May-bush or Service.

Pyrus Botryapium, *Willd.* Sp. Pl., vol. ii. p. 1013. *Pursch*, Flor. Amer., vol. i. p. 339. —Icosandria Pentagynia, *Linn.*—Rosaceæ, *Juss.*

This species is distinguished by its ovate, acuminate leaves, racemose flowers, linear-lanceolate petals, pubescent germens, and smooth calycine segments.

TENNESSEE SWAMP-WARBLER.

Helinaia peregrina, *Wils.*

PLATE CX.—Male.

So very rare does this little bird seem to be in the United States, that in the course of all my rambles I never saw more than three individuals of the species. The first was procured near Bayou Sara, in the State of Louisiana, in the spring of 1821, when I drew it with the holly twig on which it was standing when I shot it. The second I obtained in Louisiana also, not many miles from the same spot, in the autumn of 1829, and the last at Key West, in May 1832. Of its migrations or place of breeding I know nothing.

It is an active and nimble species, an expert catcher of flies, fond of hanging to the extremities of branches, like several others of the tribe. It utters a single mellow *tweet*, as it passes from one branch to another in search of food, or while on the wing, when it moves in a desultory manner for some distance, diving suddenly towards the tree on which it intends to alight. All the individuals which I procured were males.

Tennessee Swamp Warbler

Male

Ilex laurifolia.

Drawn from Nature by J.J.Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J.T.Bowen Philad.

TENNESSEE WARBLER, *Sylvia peregrina*, Wils. Amer. Orn., vol. iii. p. 83.
SYLVIA PEREGRINA, Bonap. Syn., p. 87.
TENNESSEE WARBLER, *Sylvia peregrina*, Nutt. Man., vol. i. p. 412.
TENNESSEE WARBLER, *Sylvia peregrina*, Aud. Orn. Biog., vol. ii. p. 307.

Bill of moderate length, thick at the base, tapering, straight, acute; upper mandible nearly straight in its dorsal outline, the edges sharp, without a notch. Nostrils basal, oval, covered above by a membrane, and partially concealed by the feathers. Head of ordinary size, neck short, body rather slender. Feet of ordinary length, rather slender; tarsus compressed, covered anteriorly with a few long scutella, sharp behind; toes slender, free, the outer united to the second joint, the hind-toe proportionally large; claws arched, slender, much compressed, acute.

Plumage blended, soft. Wings longish, little curved; the second and third quills longest. Tail rather longish, nearly even, the lateral feathers bent outwards.

Bill dark brown, paler beneath. Iris hazel. Feet brown, tinged with blue. The general colour above is yellow-olive, the head darker, the under parts cream-coloured, fading behind into white. A pale yellow line over the eye; quills dark brown, the primaries margined with yellowish-grey; the wings without bands.

Length 4½ inches, extent of wings 8; bill along the back $\frac{4\frac{1}{2}}{12}$, along the edge $\frac{6}{12}$; tarsus $\frac{8}{12}$.

ILEX LAXIFLORA.

ILEX LAXIFLORA, *Pursch*, Fl. Amer. Sept., vol. i. p. 117.—TETRANDRIA TETRAGYNIA, *Linn.*—RHAMNI, *Juss.*

Leaves ovate, sinuato-dentate, spinous, shiny, flat; peduncles supra-axillar, aggregated on the younger branches. An evergreen shrub, with yellowish-red berries.

BLUE-WINGED YELLOW SWAMP-WARBLER.

HELINAIA SOLITARIA, *Wils.*

PLATE CXI.—MALE AND FEMALE.

This pretty little Warbler is migratory, and arrives in Louisiana from the south in the beginning of spring. It is found in open woods, as well as in the vicinity of ponds overgrown with low bushes and rank weeds. Along with a pair of Blue-winged Yellow Warblers, I have represented a species of Hibiscus, which grows on the edges of these ponds. Its flowers are handsome, but unfortunately have no pleasant odour.

The species which now occupies our attention is a busy, active bird, and is seen diligently searching among the foliage and grasses for the small insects on which it feeds, mounting now and then towards the tops of the bushes, to utter a few weak notes, which are in no way interesting.

Its nest, which is singularly constructed, and of an elongated inversely conical form, is attached to several stalks or blades of tall grass by its upper edge. The materials of which it is formed are placed obliquely from its mouth to the bottom. The latter part is composed of dried leaves, and is finished within with fine grass and lichens. The female lays from four to six eggs, of a pure white colour, with a few pale red spots at the larger end. The first brood is out about the middle of May, the second in the middle of July. The young disperse as soon as they are able to provide for themselves, this bird being of solitary habits.

It leaves Louisiana in the beginning of October. I have never seen this species farther eastward than the State of New Jersey, where I have killed several within a few miles of Philadelphia. It is frequent in the barrens of Kentucky, and up the Mississippi, as far at least as St. Genevieve, where I shot two individuals many years ago.

Its flight is short, undetermined, and is performed in zig-zag lines, as in most of its tribe. It sometimes ascends twenty or thirty yards in the air, as if with an intention of going to a great distance, but still moving in a zig-zag manner, when it suddenly turns about, and comes down near the place from which it set out. It does not chase insects on wing, but feeds in a great measure on the smaller kinds of spiders, not neglecting, however, to seize other insects when they come within reach. It remains almost constantly among the bushes, and is seldom seen on trees of any size.

Blue-winged Yellow Swamp-Warbler.

1. Male 2. Female.

Cotton Rose. Hibiscus grandiflorus.

Drawn from Nature by J.J. Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J.T. Bowen. Phila.a

Blue-winged Yellow Warbler, Wils. Amer. Orn., vol. ii. p. 109.
Sylvia solitaria, Bonap. Syn., p. 87.
Blue-winged Yellow Warbler, *Sylvia solitaria*, Nutt. Man., vol. i. p. 410.
Blue-winged Yellow Warbler, *Sylvia solitaria*, Aud. Orn. Biog., vol. i. p. 102.

Adult Male.

Bill nearly as long as the head, straightish, subulato-conical, acute, as deep as broad at the base, the edges acute, the gap line a little deflected at the base. Nostrils basal, lateral, elliptical, half-closed by a membrane. Head rather small. Neck short. Body slender. Feet of ordinary length, slender; tarsus longer than the middle toe, covered anteriorly by a few scutella, the uppermost long; toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, acute, arched.

Plumage soft, blended, tufty. Wings of ordinary length, acute, the second quill longest. Tail longish, rounded when expanded, slightly forked when closed.

Bill black, with a pale margin. Iris dark brown. Feet and claws flesh-colour, tinged with yellow. Forehead, crown, and under parts of a rich bright-yellow. Back of the head and neck, the back and upper tail coverts bright grass-green. Lore black. Wings greyish-blue, slightly margined with paler, the first two rows of coverts tipped with whitish. Four middle tail-feathers greyish-blue, the outer webs of the rest, and an oblique portion of the outer feather at the end, of the same colour, their inner webs white.

Length $4\frac{3}{4}$ inches, extent of wings 7; bill along the ridge $\frac{1}{2}$, along the gap 1.

Adult Female.

The female scarcely differs from the male in appearance, and is of nearly the same dimensions.

Large-flowered Hibiscus, Cotton Rose, or Wild Althæa.

Hibiscus grandiflorus, *Mich.* Fl. Amer., vol. ii. p. 46. *Pursch*, Fl. Amer., p. 455.—Monadelphia polyandria, *Linn.*—Malvaceæ, *Juss.*

This beautiful species of Hibiscus, which does not precisely agree with any that I have seen described, although it is probably the above, is characterized by its ovato-cordate, obtusely and irregularly serrated, acute, venous tough leaves, and its large rose-coloured flowers, which are deep red at the base, and streaked with the same colour. The corolla is about five inches in diameter, the anthers yellow. The stem and leaves are smooth. It grows in salt marshes, and by the edges of pools.

ORANGE-CROWNED SWAMP-WARBLER.

HELINAIA CELATA, *Say.*

PLATE CXII.—MALE AND FEMALE.

This species is seen in the company of *Sylvicola coronata* and *Sylvicola petechia*, both in the Southern States where it passes the winter, and while crossing the Union in early spring on its way to those North-eastern Districts where it breeds. It leaves Louisiana, the Floridas, and the Carolinas from the beginning to the end of April; is seen in the Middle States about the 10th of May; and reaches the State of Maine and the British provinces by the end of that month. On its return, besides settling in the Southern States, it spreads over the provinces of Mexico, from whence individuals in spring migrate by the vast prairies, and along the shores of the western parts of the Union, entering Canada in that direction in the first days of June. The Orange-crowned Warbler is thus very widely distributed over North America. I met with none, however, between Halifax and Labrador, nor did I see one in the latter country.

In the summer months, it manifests a retiring disposition, keeping among the low brushwood that borders the rivers and lakes of the Northern Districts. While in the south, however, where it is rather common near the sea-shore, it is less cautious, and is seen, in considerable numbers, in the orange groves around the plantations, or even in the gardens, especially in East Florida. Like the *Sylvicola petechia*, it plays about the piazzas, skipping on wing in front of the clapboarded house, in quest of its prey, which it expertly seizes without alighting, or without snapping its bill, except during the disputes that occur among the males, as the spring advances. You find it among the branches of the Pride-of-China, a tree that ornaments the streets of the southern cities and villages, as well as on trees bordering the roads. From these it descends into the smilaxes, rose-bushes, and other shrubs, all of which yield it food and shelter. At the approach of darkness, it enters among the foliage of the evergreen wild orange and wild peach, where, with the *Sylvicola petechia* and *Sylvicola coronata*, it quietly passes the night. Its food principally consists of insects, partly caught on the wing, but chiefly along the branches and twigs, where the little depredator seeks them out with great activity.

The flight of this bird is short, rather low, and is performed by gently

Orange-crowned Swamp Warbler.

1. Male. 2. Female.

Huckleberry. Vaccinium frondosum.

Drawn from Nature by J.J. Audubon, F.R.L.S. Lith.ª Printed & Col.ª by J. T. Bowen. Phila.ª

curved glidings. When ascending, however, it becomes as it were uncertain and angular.

The Orange-crowned Warbler breeds in the eastern parts of Maine, and in the British provinces of New Brunswick and Nova Scotia. Its nest is composed of lichens detached from the trunks of trees, intermixed with short bits of fine grass, and is lined with delicate fibrous roots and a proportionally large quantity of feathers. The eggs, which are from four to six, are of a pale green colour, sprinkled with small black spots. The nest is placed not more than from three to five feet from the ground between the smaller forks of some low fir tree. Only one brood is raised in the season, and the birds commence their journey southward from the middle of August to the beginning of September.

In autumn, it nearly loses the orange spot on its head, there being then merely a dull reddish patch, which is only seen on separating the feathers. In the breeding season, the part in question becomes as bright as you see it in the plate, in which are represented a pair of these birds, on a twig of the great huckleberry. The young do not shew any orange on the head until the following spring.

SYLVIA CELATA, Say, Long's Exped., vol. i. p. 169.
SYLVIA CELATA, Bonap. Syn., p. 38.
ORANGE-CROWNED WARBLER, *Sylvia celata*, Bonap. Amer. Orn., vol. i. p. 45.
ORANGE-CROWNED WARBLER, *Sylvia celata*, Nutt. Man., vol. i. p. 413.
ORANGE-CROWNED WARBLER, *Sylvia celata*, Aud. Orn. Biog., vol. ii. p. 449.

Adult Male.

Bill longish, slender, straight, tapering to a very sharp point. Nostrils basal, oval, feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, sharp-edged behind, longer than the middle toe; toes scutellate above, free; claws arched, slender, compressed, acute.

Plumage blended, the feathers soft and tufty. Wings rather short, the second and third quills longest. Tail slightly emarginate, of ordinary length, the twelve feathers rather narrow, and tapering broadly to a point.

Bill dusky above, pale greyish-blue beneath. Iris hazel. Feet and claws dusky. The general colour of the plumage above is dull brownish-green, the rump and tail-coverts light yellowish-green, the edge of the wing at the flexure yellow. On the crown is a spot of bright reddish-orange, more distinct when the feathers are raised. The under parts are of a dull olivaceous yellow, the lower tail-coverts bright yellow. The quills and tail-feathers dark brown, slightly margined with paler.

Length 5½ inches, extent of wings 7$\frac{11}{12}$; bill along the ridge $\frac{5}{12}$, along the edge ½; tarsus $\frac{9}{12}$.

Adult Female.

Bill and feet of the same colour as in the male, the former inclined to yellowish-grey beneath. The female wants the orange spot on the crown, but in other respects resembles the male in colour, although the rump and upper tail-coverts are of a darker tint.

Length slightly less than that of the male.

The Huckleberry or Blue-tangles.

Vaccinium frondosum, *Willd.*, Sp. Pl., vol. ii. p. 352. *Pursch*, Flor. Amer., vol. i. p. 285.—Decandria Monogynia, *Linn.*—Ericæ, *Juss.*

Leaves deciduous, ovato-oblong or lanceolate, entire, smooth, glaucous beneath, resinous; racemes lax, bracteate; pedicels long, filiform, bracteolate; corollas ovato-companulate, with acute laciniæ and included anthers. The flower is white, the calyx green, the berry globular and of a bluish-black colour. It varies greatly in the form of the leaves, as well as in stature, sometimes attaining a height of six or seven feet.

Huckleberries form a portion of the food of many birds, as well as of various quadrupeds. Of the former, I may mention in particular the Wild Turkey, several species of Grouse, the Wild Pigeon, the Turtle-dove, some Loxias, and several Thrushes. Among the latter, the Black Bear stands pre-eminent, although Racoons, Foxes, Opossums, and others destroy great quantities. When the season is favourable, these berries are so thickly strewn on the twigs, that they may be gathered in large quantities, and as they become ripe, numerous parties resort to the grounds in which they are found, by way of frolicking, and spend the time in a very agreeable manner.

Nashville Swamp Warbler.

1. Male. 2. Female.

Swamp Spice. Ilex Thuinoides.

Drawn from Nature by J.J. Audubon, F.R.S. &c. &c. ...th Printed & Col.d by J.T. Bowen, Philad.a

NASHVILLE SWAMP-WARBLER.

HELINAIA RUBRICAPILLA, *Wils.*

PLATE CXIII.—MALE AND FEMALE.

I have shot only three or four birds of this species, and these were all that I ever met with. I found them in Louisiana and Kentucky. A few specimens belonging to Mr. TITIAN PEALE of Philadelphia, and which he, with his usual kindness, lent me for a few days, to compare their colouring with my drawings and notes, were the only others that I have seen. It is probable he had procured them in Pennsylvania, although I cannot now recollect if this was really the case.

The flight of this little bird is short, light, and entirely similar to that of the other species of this genus already described. Its food consists of insects and larvæ, which it procures by searching diligently and actively amongst the leaves and buds of low trees. It does not pursue insects on wing. With the exception of a few low, eagerly repeated, creaking notes, I have not heard any sounds from them. While uttering these notes, which are all the species seem to have in lieu of song, the male stands erect and still. I am not aware of its nest having been discovered or described by any naturalist.

The plant on a twig of which two Nashville Warblers are represented, is usually called the *swamp spice*. It is a low bush, grows in the water, in swampy and muddy ground, and occurs from Georgia to New York. The berries, which are seldom eaten by birds, have little pulp, and consequently a large seed.

NASHVILLE WARBLER, *Sylvia rubricapilla*, Wils. Amer. Orn., vol. iii. p. 120.
SYLVIA RUBRICAPILLA, Bonap. Syn., p. 87.
NASHVILLE WARBLER, *Sylvia rubricapilla*, Nutt. Man., vol. i. p. 412.
NASHVILLE WARBLER, *Sylvia rubricapilla*, Aud. Orn. Biog., vol. i. p. 450.

Bill rather short, slender, tapering, nearly straight, as deep as broad at the base. Nostrils basal, lateral, elliptical, half-closed by a membrane. Head of ordinary size, neck short, body full. Feet of ordinary length, slender; tarsus longer than the middle toe, anteriorly scutellate; toes free, scutellate above; claws slender, compressed, acute, arched.

Adult Male.

Plumage soft, blended, tufty. Wings short, curved, the first and second quills longest. Tail short, forked, of twelve rounded feathers.

Bill greenish-brown. Iris dark brown. Feet yellowish-green. Head and cheeks brownish-grey, the upper part of the head dark red. A circle of white round the eye. The general colour of the upper parts is brownish-green, of the under greenish-yellow, brighter on the throat and breast. Inner webs of the wing and tail-feathers dusky, the outer brownish-green, and of the primaries bright yellow.

Length $4\frac{1}{2}$ inches, extent of wings 7; bill along the ridge $\frac{1}{3}$, along the gap $\frac{1}{2}$; tarsus $\frac{3}{4}$.

* Adult Female.

The female is much duller; the head and hind-neck dark brownish-grey, tinged with green, the former without the red patch, the under parts more mixed with grey, the sides olivaceous, and the yellow of the wings less pure.

The Swamp Spice.

Ilex prinoides, *Willd.* Sp. Pl., vol. i. p. 709. *Pursch*, Fl. Amer., vol. i. p. 118.—Tetrandria Tetragynia, *Linn.*—Rhamni, *Juss.*

Leaves lanceolate, attenuated at the base, slightly serrated; peduncles one-flowered. The leaves of this species are deciduous, the berries bright red.

Genus V.—MNIOTILTA, *Vieill.* CREEPING-WARBLER.

Bill rather long, straight, very slender, nearly as broad as high at the base, much compressed toward the end; upper mandible with the dorsal line very slightly convex, the edges a little inflected toward the end, the notches obsolete, the tip acute; lower mandible with the dorsal line straight, the sides convex, the edges involute, the tip attenuated. General form slender. Feet of moderate length, very slender; tarsus shorter than the middle toe and claw, much compressed, the upper scutella blended; toes rather long, extremely compressed, the first very long, the second shorter than the third, which is adherent at the base, claws rather long, well arched, extremely

Black and white Creeping Warbler.

Male

Black Larch Pinus pendula.

Drawn from Nature by J.J.Audubon F.R.S.F.L.S. Lith.d Printed & Col.d by J.T.Bowen, Phila.a

compressed, and acute. Plumage very soft and blended. Bristles obsolete. Wings long, with the second and third quills longest and about equal, the first slightly shorter, and exceeding the fourth. Tail of moderate length, nearly even. This genus connects the Sylvicolinæ with the Certhianæ.

BLACK-AND-WHITE CREEPING-WARBLER.

MNIOTILTA VARIA, *Linn.*

PLATE CXIV.—MALE.

The Black-and-white Creeper appears in the State of Louisiana as soon as the buds on the trees begin to expand, which happens about the middle of February. It throws itself into the forests, where it breeds, and remains until the beginning of November. It is usually seen on the largest trees of our woods. It has a few notes, consisting of a series of rapidly enunciated *tweets*, the last greatly prolonged. It climbs and *creeps* along the trunks, the branches, and even the twigs of the trees, without intermission, and so seldom perches, that I do not remember ever having seen it in such a position. It lives principally on small ants and their larvæ, which it secures as it ascends or descends in a spiral direction, sidewise, with the head either uppermost or beneath. It keeps its feet close together, and moves by successive short hops with a rapidity equalling even that of the Brown Creeper. It dives from the tops of the trees to their roots, and again ascends. At other times, it alights on a decayed fallen tree, and searches the bark for food, peeping into the crevices. It has only a very short flight, and moves directly from the tree it is on to the nearest.

In this manner the Black-and-white Creeper reaches the Northern Districts. It always prefers the most uncultivated tracts, and is especially fond of the pines and hemlock-trees of the mountain-glens. I have met with it on the borders of Canada, round Lake Champlain, in the country far to the north-west, on the banks of the Illinois, in Ohio, Kentucky, and all the wooded districts of the Arkansas and Red river.

In Louisiana, its nest is usually placed in some small hole in a tree, and is composed of mosses in a dry state, lined with cottony substances. The eggs

are from five to seven, of a short oval form, white, with a few brownish-red spots chiefly at the large end.

Two broods are raised in the season. The young go about in company, following the parents, and it is not unusual to see nine or ten of these birds scrambling with great activity along the trunk of a tree. I have not found its nest in the Middle States, where, however, I am convinced many breed.

I found this species in the Texas, breeding near Buffalo Bayou, where I saw a young one that had fallen out of the nest, which was in the prong of a broken limb not more than ten feet from the ground. It breeds in localities greatly distant from each other, and, like many other birds, on this account, places its nest in different situations, and varies the materials of which it is composed. Mr. NUTTALL saw a nest in the vicinity of Boston, which was "niched in the shelving of a rock, on the surface of the ground, and was externally composed of coarse stripes of the inner bark of the hemlock-tree (*Abies canadensis*) which overshadowed the situation. With these were mixed soft dissected old leaves, and a few stalks of dead grass; the lining was made of a thin layer of black hair."

The eggs of this bird measure four and a fourth eighths in length, and half an inch in breadth. Some of them are much more spotted with light reddish-brown and purplish dots than others. Of this latter kind I have a beautiful specimen presented by my friend Dr. T. M. BREWER of Boston.

As some persons might suppose from my account of its habits, that it uses its tail to aid it in climbing, like the Brown Creeper, I must here state that it never does so, but hops in the manner of the Nuthatches. My friend Dr. BACHMAN has observed it in spring perched on small twigs and uttering its song composed of half a dozen notes, which are heard at a considerable distance. It arrives in South Carolina early in April, remains until about the 10th of May, and has been seen on its return as early as the 1st of September.

Dr. T. M. BREWER sends me the following notice:—"This bird, which you speak of as breeding in the hollows of trees, with us always builds its nest on the ground. I say always, because I never knew it to lay anywhere else. I have by me a nest brought to me by Mr. APPLETON from Batternits, New York, which was found in the drain of the house in which he resided. It is neat and compact, measures $3\frac{1}{2}$ inches in external diameter, $2\frac{1}{2}$ in internal; its internal depth is 1 inch, the external two. It is composed externally of coarse hay, and lined in an unusually compact manner with horse-hair. The eggs are oval, nearly equal at both ends, and measure six-eighths of an inch by nine-sixteenths, and are in markings exactly as you describe them. The number in this nest was three, but their complement is, I believe, four."

Black-and-white Creeper, *Certhia varia*, Wils. Amer. Orn., vol. iii. p. 23.
Sylvia varia, Bonap. Syn., p. 81.
Black-and-white Creeper, *Certhia varia*, Aud. Orn. Biog., vol. i. p. 452; vol. v. p. 471.

Adult Male.

Bill rather long, slightly arched, compressed, extremely slender, acute; nostrils basal, narrow, half-closed by a membrane. General form slender. Feet of ordinary length, slender; tarsus longer than the middle toe, scutellate before; toes free, scutellate, the hind one proportionally larger; claws compressed, very acute, arched.

Plumage soft and blended. Wings of ordinary length, third quill longest, secondaries short. Tail nearly even, of twelve narrow, rounded feathers.

Bill black. Iris hazel. Feet dusky yellow. Middle of the head longitudinally white, bordered on each side by a broad stripe of black, beneath which, on each side, over the eye, is a line of white. Ear-coverts and chin black. Back and breast streaked with white and black. Wings black, the outer margins of the quills greyish-white, the tips of the larger coverts, excepting the primary ones, white, forming two broad bands of that colour across the wing. Tail black, tinged with bluish-grey externally, the ends of the inner webs of the three outer feathers on each side white. Abdomen white; sides and under tail-coverts white, spotted with black.

Length $5\frac{1}{2}$ inches, extent of wings $7\frac{1}{2}$; bill along the ridge $\frac{1}{2}$.

The young are similar in colouring to the females. The young males do not acquire their full plumage until the following spring.

A male of this species is represented on a twig of the tree commonly called the *black larch*.

The Black Larch.

Pinus pendula, *Pursch*, Flor. Amer., vol. ii. p. 645.—Monœcia Polyandria, *Linn.*—Coniferæ, *Juss.*

Leaves fasciculate, deciduous; cones oblong, the margins of the scales inflected; bracteoles panduriform, with an attenuated tip. This species, which grows in cedar swamps, in the Northern States, attains a great size, and resembles the European larch in appearance.

FAMILY IX. CERTHIANÆ. CREEPERS.

Bill of moderate length or rather long, slender, slightly arched, much compressed, acute; upper mandible with its dorsal outline convex or arched, the ridge narrow, the notches slight or obsolete, lower mandible with the angle rather long and narrow, the dorsal line straight or slightly decurved, the edges inclinate, the tip acute. Head moderate, ovate; neck short, body slender. Feet of moderate length, or rather short; tarsus about the same length as the middle toe, compressed, with eight anterior scutella; toes of moderate length, much compressed, hind toe proportionally long, outer adherent at the base; claws rather long, extremely compressed, arched, acute. Wings short or of moderate length. Tail of twelve feathers, generally much rounded. Tongue slender, emarginate and papillate at the base, very narrow, tapering to a lacerated point. Œsophagus of moderate width, without crop; proventriculus bulbiform; stomach of moderate size, oblong, or elliptical, moderately muscular, with the muscles distinct; epithelium dense, longitudinally rugous; intestine short, rather wide; cœca very small; cloaca globular. Trachea simple, with four pairs of inferior laryngeal muscles.

Genus I.—CERTHIA, *Linn.* TREE-CREEPER.

Bill about the same length as the head, very slender, arched, much compressed, acute; upper mandible with the dorsal line arched, the ridge narrow, the sides sloping at the base, nearly erect in the rest of their extent, the edges sharp, arched, without notch, the tip acute; lower mandible with the angle rather long, narrow, and pointed, the outline decurved, the sides erect and convex, the edges inclinate, the tip acute. Nostrils linear-oblong, operculate. Head ovate; neck short; body slender. Feet rather short, very slender, tarsus rather shorter than the middle toe, very slender, much compressed; toes extremely compressed; the first comparatively large, longer than the middle toe, including the claw; the inner toe shorter than the outer; claws long, moderately arched, slender, extremely compressed, laterally grooved, acute, that of the hind toe very long. Plumage long, loose, very soft. Bristles obsolete. Wings of moderate length, very broad; the first quill very short, the fourth and fifth longest. Tail long, graduated, of twelve moderately stiff pointed feathers.

Brown Tree creeper

1 Male 2. Female.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.Printed & Col.d by J. T. Bowen, Philad.a

BROWN TREE-CREEPER.

CERTHIA FAMILIARIS, *Linn.*

PLATE CXV.—MALE AND FEMALE.

The only parts of the United States in which I have not met with this species during winter are the eastern and northern portions of the Floridas. This has appeared the more strange to me, because I have observed several of these birds in Georgia, Alabama, Mississippi, and Louisiana, at that season, during which it is not rare in any of the States intervening between these and Maryland. In the spring and summer months, or what is usually called the breeding season, the Brown Creeper may be found over the whole country, from the thick woods of the northern parts of Pennsylvania to Newfoundland. None were seen by my party or myself in Labrador, and as no mention is made of this species in the Fauna Boreali-Americana, I suspect that the want of sufficiently wooded localities prevents it from proceeding so far north.

This bird alights on trees of all kinds, in the Carolinas on pines, in Maine on maples, in Kentucky on hickories, oaks, or ash-trees; and as, from the time when it is first able to fly, it is one of the most constant roamers of the forest, you may meet with it in almost any part of the woods. The taller trees, however, are generally preferred by it, perhaps on account of its reluctance to fly from one tree to another at a distance. It seldom leaves a tree without searching all its crannies, from near the roots to the tops of the larger branches, which it does with incomparable assiduity and care, yet by movements so rapid that a person unacquainted with it might be inclined to think that it runs up the trunk and branches, directly or spirally, above or beneath the latter, without any other intention than that of reaching the end of its journey as quickly as possible. The reverse of this, however, is the case, for, shoot one of them when you please, you will find its stomach crammed with insects and larvæ, such as occur on the trees. When these are not found in abundance, the Creeper appears to discover the scarcity very soon, and instead of continuing its search, abandons the tree when not many yards from the ground, and launching off shoots downwards in its usual manner, and alights a little above the roots of another in the neighbourhood. I have observed it when satiated, remain still and silent as if asleep, and, as it were, glued to the bark, for nearly an hour at a time. But whether the

bird was really asleep, or wished to elude us, is more than I can affirm, although I am inclined toward the latter supposition, because toward night it retires to a hole, where frequently as many as a whole brood repose together, as I have on several occasions witnessed.

When on the move, the Brown Creeper emits at short intervals a sharp, quick, rather grating note, peculiar to itself, and by which you may, if acquainted with it, discover from a distance of more than sixty yards, in calm weather, where it is. Yet, after all, it requires some time, and a good eye, to perceive it, if on one of the upper branches of a tall tree. The name of "Gleaner," applied to this bird, is, in my opinion, very inappropriate; for instead of its following the different tribes of small Woodpeckers, or even Nuthatches, which, however, are at times found in company with it, I have seen our little hunter travel over every part of a large and tall tree, and afterwards remove to another, before the Woodpecker had hammered its way to a grub, which it knew to be under the bark; and all the activity of our Nuthatches does not perhaps surpass that of the present species. Yet they all pursue their avocations at the same time, and now and then on the same trees, although this is by no means a constant habit with them.

Wilson was of opinion that the Brown Creeper moves "rapidly and uniformly along, with his tail bent to the tree, and not in the hopping manner of the Woodpecker;" but I must differ from him, for the bird at each move actually hops, assisted by the pressure of its elastic tail, which indeed is the case with all our Woodpeckers, whether on the upper or the lower surface of a branch. This may be easily seen on placing a Brown Creeper in a cage containing a piece of a branch covered with scaly bark.

This bird breeds in the hole of a tree, giving a marked preference to such as are small and rounded at the entrance. For this reason, perhaps, it often takes possession of the old and abandoned nests of our smaller Woodpeckers and Squirrels; but it is careless as to the height of the situation above the ground, for I have found its nest in a hole in a broken stump which I could reach with my hand, although I could not examine it on account of the hardness of the wood. All the nests which I have seen were loosely formed of grasses and lichens of various sorts, and warmly lined with feathers, among which I in one instance found some from the abdomen of *Tetrao Umbellus*. The eggs are from six to eight, but in some instances I have found only five, when I have supposed them to belong to a second brood. They measure five-eighths and three-fourths of an inch in length, four and a quarter eighths in their greatest breadth. Their ground-colour is white, with a yellowish tint, irregularly marked with red and purplish spots and dots, which are larger and more crowded toward the broad end, leaving a space at its apex nearly free, as is also the case with that of the narrow end; there are small

dots of pure neutral tint here and there, but none of those "streaks of dark brown" described by WILSON.

The young, like those of our Woodpeckers and Nuthatches, remain about the nest until they are able to fly, and in their minority are well supplied with food. The members of a family usually remain together until the next spring.

The males of this species are larger than the females. This difference is very apparent in the bill. In the winter months, the Brown Creeper is not unfrequently seen in orchards, and at a short distance from farm-houses; but in the breeding season it retires to the interior of the forests. Its food consists chiefly of ants, larvæ, small insects, and particles of lichens; and, if one be placed near the nose, it is generally found to emit an odour like that of ants.

BROWN CREEPER, *Certhia familiaris*, Wils. Amer. Orn., vol. i. p. 122.
CERTHIA FAMILIARIS, Bonap. Syn. p. 280.
BROWN CREEPER, Nutt. Man., vol. i. p. 585.
BROWN CREEPER, *Certhia familiaris*, Aud. Orn. Biog., vol. v. p. 158.

Adult Male.

Bill a little shorter than the head, arched, very slender, much compressed, acute; upper mandible with the dorsal line arched, the ridge narrow, the sides sloping at the base, nearly erect in the rest of their extent, the edges sharp and arched, without notch, the tip acute; nasal groove rather long, narrow, feathered; nostrils linear-oblong, operculate; lower mandible with the angle rather long, narrow, and pointed, the outline decurved, the sides erect and convex, the edges inclinate, the tip acute.

Head rather small, ovato-oblong; neck short; body slender. Feet rather short, very slender; tarsus rather shorter than the middle toe, very slender, much compressed; toes extremely compressed; the first comparatively large, longer than the middle toe, including the claws; the inner toe shorter than the outer; claws long, slender, extremely compressed, laterally grooved, acute, that of the hind toe very long.

Plumage long, loose, very soft; the feathers ovato-oblong, with disunited filaments. Wings of moderate length, very broad; the first quill very short, being ten and a half twelfths shorter than the second, which is four-twelfths shorter than the third, the fifth longest but scarcely exceeding the fourth, which is one-twelfth longer than the third. Tail long, graduated, of twelve moderately stiff pointed feathers, of which the lateral are eight-twelfths shorter than the middle.

Upper mandible brownish-black, lower flesh-coloured, with the tip dusky. Iris brown. Feet light reddish-brown, claws yellowish-grey. The upper

parts are reddish-brown, the head darker, the rump light brownish-red; all the feathers with a central dull whitish streak. Wings deep brown, the coverts tipped, the secondary coverts barred at the base with dull yellow, of which a broad band in the midst of a brownish-black space crosses both webs of the quills, excepting the inner webs of the outer four, and the outer webs of the outer three; most of the quills have also a greyish-yellow patch along the outer web toward the tip, which is dull white, the tail-feathers are yellowish-brown, with shafts of the same colour, the webs darker toward the end. A silvery white band passes over the eye; the cheeks are dark brown; the lower parts are silvery-white, the sides tinged with brown.

Length to end of tail $5\frac{1}{2}$ inches; to end of wings 4; to end of claws $4\frac{1}{4}$; extent of wings $8\frac{1}{2}$; bill along the ridge $\frac{7}{12}$, along the edge of lower mandible $\frac{10}{12}$, wing from flexure $2\frac{7}{12}$; tail $2\frac{9}{12}$; tarsus $\frac{6}{12}$; hind toe $\frac{3}{12}$, its claw $\frac{5}{12}$; middle toe $\frac{5}{12}$, its claw $\frac{4}{12}$.

Adult Female.

The Female is considerably smaller, and generally of a darker colour, but otherwise similar.

Length to end of tail $5\frac{1}{2}$ inches, to end of wings $4\frac{1}{4}$, to end of claws $4\frac{1}{2}$; extent of wings 8; bill along the ridge $\frac{6}{12}$.

The shafts and webs of the tail are somewhat undulated, so as to give the appearance of their being barred with dusky. Younger individuals have the rump less red. Some have the lower parts almost pure white, while in others they are dusky white, being soiled by matter rubbed from the trees.

On comparing four fresh and several dried specimens shot near Edinburgh, with eight dried specimens from America, one of which is from the Columbia river, I can find nothing on which to found a specific distinction.

The roof of the mouth is flat, but the mandible concave; the posterior aperture of the nares linear, margined with two rows of papillæ. The tongue is slender, decurved, long, measuring $6\frac{1}{2}$ twelfths, deeply emarginate and papillate at the base, concave above, horny in the greater part of its length, and tapering to a point. The œsophagus is 1 inch 8 twelfths long, of moderate width, its average diameter $1\frac{1}{2}$ twelfths, without dilatation. The proventriculus is enlarged to 2 twelfths. The stomach is a muscular gizzard, of a somewhat elliptical form, 5 twelfths long, $4\frac{1}{2}$ twelfths in breadth; its lateral muscles very strong, the tendons of moderate size; the epithelium thin, tough, longitudinally rugous, reddish-brown. The contents of the stomach are remains of insects of various kinds, and one large particle of quartz. The intestine is short, being only $4\frac{1}{2}$ inches long; its greatest diameter 1 twelfth; the rectum is dilated; the cœca, which come off at the distance of 5 twelfths from the extremity, are $\frac{1}{2}$ twelfth long, and $\frac{1}{4}$ twelfth in breadth.

Rock Wren?

Adult Female.

Smilacina borealis?

Drawn from Nature by J.J. Audubon, F.R.S.F.L.S.

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GENUS II.—TROGLODYTES, *Cuv.* WREN.

Bill of moderate length, or nearly as long as the head, slender, slightly arched, much compressed toward the end; upper mandible with the dorsal line slightly convex, the edges a little inflected toward the end, the notches slight, the tip rather acute; lower mandible with the angle rather long and narrow, the outline slightly decurved, the sides erect and convex, the edges inclinate, the tip acute. Nostrils oblong, operculate, exposed. Head oblong; neck short; body slender. Feet of ordinary length, rather strong; tarsus longer than the middle toe, compressed, with eight anterior distinct scutella; toes of moderate size, the third and fourth united at the base, the first very large, the lateral nearly equal; claws rather long, moderately arched, much compressed, very acute. Plumage soft and blended. Bristles obsolete. Wings of moderate length, or short, convex, much rounded; the first quill very small, the fourth and fifth longest. Tail rather short, rounded, of twelve slightly arched, weak, rounded feathers.

ROCK WREN.

TROGLODYTES OBSOLETUS, *Say.*

PLATE CXVI.—ADULT FEMALE.

This species was discovered by some of Major LONG's exploring party, and first described by Mr. THOMAS SAY. My friend THOMAS NUTTALL, who had opportunities of studying its habits, during his recent journey in company with Mr. TOWNSEND, has assured me that they are very similar to those of the other Wrens. The figure in the plate was taken from an adult female, given to me by Mr. NUTTALL; and I have since then obtained two males.

"On the 21st of June," says Mr. NUTTALL, "on the ledges of the bluffs

which border the bottom of Hare's Fork of the Siskadee (or Colorado of the West), I heard, and at length saw this curious Mountain Wren. Its actions are those of the Carolina species, *Troglodytes ludovicianus*. The old female (as I supposed) sat upon a ledge of rock at the head of a high ravine in the bluff, cocking her tail, and balancing herself, at the same time uttering a *tshurr, tshurr*, and *té aigh*, with a strong guttural accent, and now and then, when approached, like the common Short-billed Marsh Wren, *Troglodytes brevirostris*, a quick guttural *tshe de de*. It has also a shrill call at times, as it perches on a stone on the summit of some hill, again similar to the note of the Carolina Wren, occasionally interrupted by a *tshurr*. Among these arid and bare hills of the central table-land they were quite common. The old ones were feeding and watching a brood of four or five young, which, though fully grown, were protected and cherished with the querulous assiduity so characteristic of the other Wrens. They breed under the rocky ledges where we so constantly observed them, under which they skulk at once when surprised, and pertinaciously hide in security, like so many rats. Indeed so suddenly do they disappear among the rocks, and remain so silent in their retreat, that it is scarcely possible to believe them beneath your feet till after a lapse of a few minutes you begin to hear a low cautious chirp, and the next moment, at the head of the ravine, the old female probably again appears, scolding and jerking in the most angry attitudes she is capable of assuming. In the same rocky retreats they are commonly accompanied by a kind of small striped Ground Squirrel, like that of the eastern coast in many respects, but much smaller. These little animals, which are numerous, the White-chinned Buzzard, *Buteo vulgaris* of RICHARDSON and SWAINSON, and the Raven frequently hover over and pounce upon. We met with this species as far west as the lowest falls of the Columbia, or within a few miles of Fort Van Couver, but among rocks and cliffs as usual."

TROGLODYTES OBSOLETA, Say; Long's Exped.
TROGLODYTES OBSOLETA, Bonap. Amer. Orn., vol. i. p. 6.
ROCKY MOUNTAIN WREN, *Troglodytes obsoleta*, Nutt. Man., vol. i. p. 435.
ROCK WREN, *Troglodytes obsoletus*, Aud. Orn. Biog., vol. iv. p. 443.

Adult Female.

Bill nearly as long as the head, slender, slightly arched, compressed toward the end; upper mandible with the sides convex towards the end, flat and declinate at the base, the edges sharp and overlapping, with a very slight notch close to the declinate tip; lower mandible with the angle long and narrow, the dorsal line very slightly concave, the sides sloping outwards and

concave, the tip narrow. Nostrils oblong, basal, with a cartilaginous operculum, open and bare.

Head oblong; neck short; body slender. Legs of ordinary length; tarsus longer than the middle toe, compressed, with eight anterior distinct scutella, and two lateral plates forming a sharp edge behind. Toes of moderate size, the third and fourth united at the base, the first large, the outer considerably longer than the inner. Claws rather long, moderately arched, much compressed, with an abruptly tapering, very acute tip.

Plumage soft and loose. Wings of moderate length, convex, broad and rounded; the first quill very short, the second a quarter of an inch shorter than the third; the fourth longest, but scarcely exceeding the third and fifth. Tail rather long, much rounded, of twelve broad, rounded feathers.

Bill dusky, with the edges pale yellow. Iris hazel. Feet dusky. Upper parts light dull yellowish-brown, and, excepting the rump, transversely barred with greyish-brown; the wings barred in the same manner, excepting the primaries, which are plain; the secondary coverts with a small white spot near the tip. Tail-coverts barred like the back, as are the two middle tail-feathers; the others broadly tipped with pale yellowish-red, undulated with dusky; behind which is a broad band of brownish-black; the remaining or basal part banded like the central feathers, the outer feather with four reddish-white spots or bars on the outer web, the intervals being brownish-black, and a spot of white on the inner web. The lower parts are greyish-white, tinged with sienna, the sides inclining to yellowish-red. The lower tail-coverts are barred with brownish-black.

Length to end of tail 6 inches, wing from flexure $2\frac{11}{12}$; tail $2\frac{1}{4}$; bill along the ridge $\frac{9}{12}$; tarsus $\frac{9}{12}$; hind toe $\frac{4}{12}$, its claw $\frac{3}{12}$; middle toe $\frac{6}{12}$, its claw $\frac{2}{12}$.

SMILACINA BOREALIS, *Pursch*, Flor. Amer. Sept., vol. i. p. 233.—HEXANDRIA MONOGYNIA, *Linn.*

Leaves elliptico-obovate, ciliated; the scape pubescent, with a corymbose umbel. The flowers are large, and of a greenish-yellow colour; the fruit roundish, of a beautiful deep blue. It is extremely abundant in the dark woods of Maine, growing in moist places.

GREAT CAROLINA WREN.

TROGLODYTES LUDOVICIANUS, *Bonap.*

PLATE CXVII.—MALE AND FEMALE.

The flight of this bird is performed by short flappings of the wings, the concave under surfaces of which occasion a low rustling, as it moves to the distance of a few steps only at each start. It is accompanied by violent jerks of the tail and body, and is by no means graceful. In this manner the Carolina Wren moves from one fence-rail to another, from log to log, up and down among the low branches of bushes, piles of wood, and decayed roots of prostrate trees, or between the stalks of canes. Its tail is almost constantly erect, and before it starts to make the least flight or leap, it uses a quick motion, which brings its body almost into contact with the object on which it stands, and then springs from its legs. All this is accompanied with a strong *chirr-up*, uttered as if the bird were in an angry mood, and repeated at short intervals.

The quickness of the motions of this active little bird is fully equal to that of the mouse. Like the latter, it appears and is out of sight in a moment, peeps into a crevice, passes rapidly through it, and shews itself at a different place the next instant. When satiated with food, or fatigued with these multiplied exertions, the little fellow stops, droops its tail, and sings with great energy a short ditty something resembling the words *come-to-me, come-to-me,* repeated several times in quick succession, so loud, and yet so mellow, that it is always agreeable to listen to them. During spring, these notes are heard from all parts of the plantations, the damp woods, the swamps, the sides of creeks and rivers, as well as from the barns, the stables and the piles of wood, within a few yards of the house. I frequently heard these Wrens singing from the roof of an abandoned flat-boat, fastened to the shore, a small distance below the city of New Orleans. When its song was finished, the bird went on creeping from one board to another, thrust itself through an auger-hole, entered through the boat's side at one place, and peeped out at another, catching numerous spiders and other insects all the while. It sometimes ascends to the higher branches of a tree of moderate size, by climbing along a grape-vine, searching diligently amongst the leaves and in the chinks of the bark, alighting sidewise against the trunk, and moving like a true Creeper. It possesses the power of creeping and of

Great Carolina? Wren?

1. Male. 2. Female.

Dwarf Buck.e eye. Æsculus. Parva?

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.d Printed & Col.d by J.T.Bowen, Philad.a

hopping in a nearly equal degree. The latter kind of motion it employs when nearer the ground, and among piles of drifted timber. So fond is this bird of the immediate neighbourhood of water, that it would be next to impossible to walk along the shore of any of the islands of the Mississippi, from the mouth of the Ohio to New Orleans, without observing several on each island.

Among the many species of insects which they destroy, several are of an aquatic nature, and are procured by them whilst creeping about the masses of drifted wood. Their *chirr-up* and *come-to-me come-to-me* seldom cease for more than fifteen or twenty minutes at a time, commencing with the first glimpse of day, and continuing sometimes after sunset.

The nest of the Carolina Wren is usually placed in a hole in some low decayed tree, or in a fence-stake, sometimes even in the stable, barn, or coach-house, should it there find a place suitable for its reception. I have found some not more than two feet from the ground, in the stump of a tree that had long before been felled by the axe. The materials employed in its construction are hay, grasses, leaves, feathers, and horse-hair, or the dry fibres of the Spanish moss; the feathers, hair or moss forming the lining, the coarse materials the outer parts. When the hole is sufficiently large, the nest is not unfrequently five or six inches in depth, although only just wide enough to admit one of the birds at a time. The number of eggs is from five to eight. They are of a broad oval form, greyish-white, sprinkled with reddish-brown. Whilst at Oakley, the residence of my friend JAMES PERRIE, Esq. near Bayou Sara, I discovered that one of these birds was in the habit of roosting in a Wood Thrush's nest that was placed on a low horizontal branch, and had been filled with leaves that had fallen during the autumn. It was in the habit of thrusting his body beneath the leaves, and I doubt not found the place very comfortable.

They usually raise two, sometimes three broods in a season. The young soon come out from the nest, and in a few days after creep and hop about with as much nimbleness as the old ones. Their plumage undergoes no change, merely becoming firmer in the colouring.

Many of these birds are destroyed by weasels and minxes. It is, notwithstanding, one of the most common birds which we have as residents in Louisiana. They ascend along the shores of the Mississippi as high as the Missouri river, and along the Ohio nearly to Pittsburgh, although they do not occur in great numbers in the neighbourhood of that city. They are common in Georgia, the Carolinas, Kentucky, Ohio and Indiana. A few are to be seen along the Atlantic shores as far as Pennsylvania, New Jersey and New York. In New Jersey I have found its nest, near a swamp, a few miles from Philadelphia. I never observed them farther to the eastward.

I found it very numerous in the Floridas and all along the coast of the Mexican Gulf to within the Texas, where it spends the whole year. Mr. TOWNSEND mentions it as being found on the Missouri.

The *dwarf buck-eye*, on a blossomed twig of which this pair of Great Carolina Wrens are placed, is by nature as well as name a low shrub. It grows near swampy ground in great abundance. Its flowers, which are scentless, are much resorted to by Humming-birds, on their first arrival, as they appear at a very early season. The wood resembles that of the *common horse-chestnut*, and its fruit is nearly the same in form and colour, but much smaller. I know of no valuable property possessed by this beautiful shrub.

GREAT CAROLINA WREN, *Certhia Caroliniana*, Wils. Amer. Orn., vol. ii. p. 61.
TROGLODYTES LUDOVICIANUS, Bonap. Syn., p. 93.
GREAT CAROLINA MOCKING WREN, Nutt. Man., vol. i. p. 429.
GREAT CAROLINA WREN, *Troglodytes ludovicianus*, Aud. Orn. Biog., vol. i. p. 399; vol. v. p. 466.

Adult Male.

Bill nearly as long as the head, subulato-conical, slightly arched, compressed towards the tip; upper mandible with the sides convex towards the end, concave at the base, the edges acute and overlapping; under mandible with the back and sides convex. Nostrils oblong, straight, basal, with a cartilaginous lid above, open and bare. Head oblong, neck of ordinary size, body ovate. Legs of ordinary length; tarsus longer than the middle toe, compressed, anteriorly scutate, posteriorly edged; toes, scutellate above, inferiorly granulate; second and fourth nearly equal, the hind toe almost as long as the middle one, third and fourth united as far as the second joint; claws long, slender, acute, arcuate, much compressed.

Plumage soft, lax, and tufty. Wings short, very convex, broad and rounded, the first quill very short, the fourth longest. Tail rather long, curved downwards, much rounded, of twelve narrowish, rounded feathers.

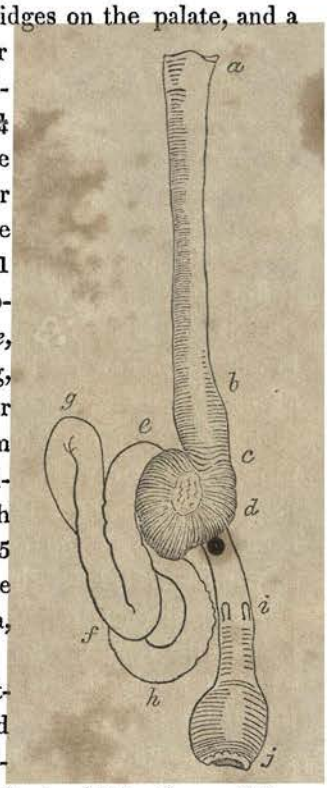
Bill wood-brown above, bluish beneath. Iris hazel. Legs flesh-colour. The general colour of the upper part is brownish-red. A yellowish-white streak over the eye, extending far down the neck, and edged above with dark brown. Quills, coverts and tail barred with blackish-brown; secondary and middle coverts tipped with white; shafts of the scapulars white. Throat greyish-white, under parts reddish-buff, paler behind. Under tail-coverts white, barred with blackish.

Length $5\frac{1}{2}$ inches, extent of wings $7\frac{1}{2}$; bill along the ridge $\frac{3}{4}$, along the gap $\frac{11}{12}$; tarsus $\frac{5}{6}$.

Adult Female.

The female differs from the male in being lighter above, tinged with grey beneath, and in wanting the white tips of the wing-coverts.

The roof of the mouth is flat, with two slight ridges on the palate, and a prominent median line anteriorly, the posterior aperture of the nares linear, 4 twelfths long, papillate; the tongue 7½ twelfths long, very slender, 1¼ twelfths broad at the base, where it is emarginate and papillate, channelled above, tapering to a rather obtuse bristly and horny point. The width of the mouth is 4 twelfths. The œsophagus, *a b c*, is 1 inch 9 twelfths long, 3 twelfths in width; the proventriculus, *b c*, 3¼ twelfths. The stomach, *c d e*, is elliptical, a little compressed, 7½ twelfths long, 5½ twelfths broad; its muscles moderate, the lower very thin, the tendons rather large; the epithelium tough, with large longitudinal rugæ, and of a reddish-brown colour. The contents of the stomach are insects and seeds. The intestine, *e f g h*, is 5 inches 9 twelfths long, its width 1½ twelfths; the cloaca, *j*, globular, 6 twelfths in width; the cœca, *i*, 1½ twelfths long, and ½ twelfth wide.



The trachea is 1½ inches long, considerably flattened, scarcely 1 twelfth broad at its widest part, and contracting to ½ twelfth; the rings 58, with 2 additional dimidiate rings. The muscles as in all the singing birds, those of the inferior larynx considerably developed. Bronchial half rings about 15.

There is a pretty large oblong salivary gland in the usual place, opening with a single duct into the fore part of the mouth.

The Dwarf Buck-eye.

Æsculus Pavia, *Willd.* Sp. Pl., vol. ii. p. 286. *Pursch*, Fl. Amer., vol. ii. p. 254.—Heptandria Monogynia, *Linn.*—Acera, *Juss.*

Leaves quinate, smooth, unequally serrated; racemes lax; generally with ternate flowers; corollas tetrapetalous, their connivent claws of the length of the calyx; stamens seven, shorter than the corolla. The flowers are scarlet.

BEWICK'S WREN.

TROGLODYTES BEWICKII, *Aud.*

PLATE CXVIII.—MALE.

The bird represented under the name of Bewick's Wren I shot on the 19th October, 1821, about five miles from St. Francisville, in the State of Louisiana. It was standing as nearly as can be represented in the position in which you now see it, and upon the prostrate trunk of a tree not far from a fence. My drawing of it was made on the spot. Another individual was shot a few days after, by a young friend, JOSEPH R. MASON, who accompanied me on my rambles. In the month of November 1829, I had the pleasure of meeting with another of the same species, about fifteen miles from the place above mentioned, and as it was near the house at which I was then on a visit, I refrained from killing it, in order to observe its habits. For several days, during which I occasionally saw it, it moved along the bars of the fences, with its tail generally erect, looking from the bar on which it stood towards the one next above, and caught spiders and other insects, as it ran along from one panel of the fence to another in quick succession, now and then uttering a low *twitter*, the only sound which I heard it emit. It occasionally hopped sidewise, now with its head towards me, and again in the contrary direction, at times descending to the ground, to inspect the lower bar, but only for a few moments. At other times, it would fly to a peach or apple-tree close to the fence, ascend to its top branches, always with hopping movements, and, as if about to sing, would for an instant raise its head, and lower its tail, but without giving utterance to any musical notes. It would then return to the fence, and continue its avocations as already described. I shot the bird, and have it preserved in spirits.

In shape, colour and movements, it nearly resembles the Great Carolina Wren, and the House Wren. It has not, however, the quickness of motion, nor the liveliness, of either of these birds.

For the following observations regarding this species I am indebted to my friend Dr. BACHMAN. "In the month of July 1835, when on a visit to the mountains of Virginia, I heard at the Salt Sulphur Springs the note of a Wren that I did not recognise as that of any of our known species. On procuring the bird I ascertained it to be the Bewick's Wren. There were a

Bewicks Wren

Male.

Iron-wood Tree.

Drawn from Nature by J.J.Audubon.F.R.S.F.L.S. Lith.ª Printed & Col.ª by J.T.Bowen. Phila.ª

pair, accompanied by four or five young, nearly full grown. The notes bore some resemblance to those of the Winter Wren, scarcely louder and more connected. It possessed all the restless habits of the other species, creeping actively between the rails of fences and among logs and stumps. One of them ascended an oak nearly to its top in the manner of a Creeper. I found the young several times during the morning entering a hole in the limb of a fallen tree a few feet from the ground, and conjectured that they had been bred in that situation. I was unable to see the nest. During a residence of a few weeks in the neighbourhood of the Virginia springs I saw several of these birds every day, and ascertained that this was the only species of Wren common in the mountains. The *Troglodytes ædon* was abundant in all the low country of Virginia, to the foot of the Alleghanies. The *T. ludovicianus* was sparingly seen in the valleys and along the water-courses, but the present species seemed particularly attached to the highest ridges, preferring grounds that had once been cleared, but now partially overgrown. It did not appear to be a shy bird, but, from its active restless habits, was procured with difficulty. It probably sleeps in hollows during the night, as I saw two or three issuing from the hole of a tree at day-light one morning. The stomachs of those which I examined were principally filled with small spiders, minute caterpillars, and the larvæ of insects. A specimen of this bird was sent me from Columbia in South Carolina, procured by Dr. GIBBS, and I have no doubt it will be found on the whole range of our southern mountains."

Dr. TRUDEAU has sent the following note:—"The Bewick's Wren must be common in Louisiana. I shot but one there, but I frequently found them in the vicinity of the woods, where it must breed. They are seen in the bushes and dive among them as soon as they perceive the gunner. The nest is different from that of the Carolina Wren."

My friends Mr. NUTTALL and Mr. TOWNSEND found this species on the Columbia river, from which country I have specimens perfectly similar to that figured in my plate. No doubt can exist that it has a wide range along the Rocky Mountains, as well as along the elevated portions of our Atlantic States. Mr. TOWNSEND says that it breeds on the ground.

I honoured this species with the name of BEWICK, a person too well known for his admirable talents as an engraver on wood, and for his beautiful work on the Birds of Great Britain, to need any eulogy of mine. I enjoyed the pleasure of a personal acquaintance with him, and found him at all times a most agreeable, kind, and benevolent friend.

The little twig on which the Wren is perched, is from the tree commonly called the *iron-wood tree*, a species of *elm*, the wood of which is very hard and of close texture. The branches, and sometimes the stem, are ornamented

with longitudinal expansions, resembling cork in their nature, but much harder.

BEWICK'S WREN, Nutt. Man., vol. i. p. 434.
BEWICK'S WREN, *Troglodytes Bewickii*, Aud. Orn. Biog., vol. i. p. 96; vol. v. p. 467.

Adult Male.

Bill nearly as long as the head, subulato-conical, acute, slightly arched, compressed. Mandibles of equal breadth, with acute margins, the gap line a little arched, and slightly deflected at the base. Nostrils basal, oval, half closed by a membrane. Feet longish, proportionally rather robust; tarsus anteriorly scutellate, compressed, acute behind, longer than the middle toe; toes free, scutellate above, the lateral ones nearly equal, the posterior long; claws slender, compressed, acute, arched, that of the hind toe much larger.

Plumage rather compact above, blended beneath. Wings short, very convex, rounded; first quill short, third and fourth longest. Tail erect, long, of ten feathers, much rounded, the outer feather not more than half the length of the middle one, all rounded at the end.

Bill blackish-brown above, pale blue beneath. Iris brown. Feet and claws pale brown. The general colour of the upper parts is rusty brown, that of the lower greyish-blue. Quills and wing-coverts barred with rusty brown and black, as are the two middle tail-feathers. Outer web of the lateral tail-feather, and the terminal portion of that of the others, whitish, barred with black, their middle parts black, toward the base barred with rusty brown. A line of pale brownish-yellow extending from the upper mandible, over the eye, to half way down the neck. The rump feathers white towards their base, with central spots.

A specimen in my possession measures $5\frac{5}{12}$ inches in length; the bill $\frac{7}{12}$; tarsus $\frac{9}{12}$; hind toe $\frac{4}{12}$, its claw $\frac{3}{12}$; middle toe $\frac{6}{12}$, its claw $\frac{3}{12}$; wing from flexure $2\frac{2}{12}$; tail $2\frac{2}{12}$. The first quill is $\frac{9}{12}$ shorter than the fifth, which is longest, but scarcely exceeds the fourth and sixth. The lateral tail-feathers are $\frac{5}{12}$ shorter than the middle.

Wood Wren

Male.

Arbutus Uva-ursi

Drawn from Nature by J.J.Audubon.F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen, Philad.a

WOOD WREN.

TROGLODYTES AMERICANUS, *Aud.*

PLATE CXIX.—MALE.

I feel much pleasure in introducing this new species to you, a family of which were shot by my sons in a deep wood, eight or ten miles from Eastport in Maine, in the summer of 1832. The young were following their parents through the dark and tangled recesses of their favourite places of abode, busily engaged in search of their insect prey; but their nest was not seen. Some weeks afterwards three adult birds of the same kind were shot near Dennisville in the same district; and, on shewing them to my young and intelligent friend THOMAS LINCOLN, Esq. he told me that they bred in hollow logs in the woods, and seldom if ever approached the farms. He had seen the eggs, but, considering it a common species there, had made no notes of their number or colour; nor had he attended to the form or materials of their nest. My drawing was made at that place.

In winter, while at Charleston, South Carolina, I saw many of them: they had much the same habits as in Maine, remaining in thick hedges along ditches, in the woods, and also not far distant from plantations. I procured several through the assistance of my friend JOHN BACHMAN, which now form part of my large collection of skins of our birds. The notes of this species differ considerably from those of the House Wren, to which it is nearly allied. I hope to be more familiar with the Wood Wren before my labours are completed, in which case I shall not fail to make you acquainted with the result of my observations.

An egg of this bird, procured in the State of Vermont, and presented to me by Dr. T. M. BREWER of Boston, differs from those of all our other Wrens: it measures six-eighths of an inch in length, four and a half eighths in breadth; its ground-colour is dull yellowish-white, blotched all over with rather large markings of pale purplish-red, and zigzag streaks of deep blackish-brown, more numerous around the middle than at either end.

WOOD WREN, *Troglodytes Americana*, Aud. Orn. Biog., vol. ii. p. 452; vol. v. p. 469.

Adult Male.

Bill of moderate length, nearly straight, slender, acute, subtrigonal at the

base, compressed towards the tip; upper mandible with the ridge rather sharp, the sides convex towards the end, the edges acute and overlapping, the tip slightly declinate and acute; lower mandible narrow, the sides convex, the sharp edges inflected. Nostrils elliptical, straight, basal, with a cartilaginous lid above, open and bare. Head ovate, neck short, body rather full. Legs of ordinary length, rather large; tarsus rather long, compressed, covered anteriorly with seven scutella, sharp behind; lateral toes equal and smallest, hind toe strongest; claws rather long, slender, acute, arched, much compressed.

Plumage soft, blended, slightly glossed. No bristly feathers about the base of the beak. Wings short, broad; the first quill half the length of the second, which is much shorter than the third; the fourth and fifth longest. Tail rather long, broad, graduated, of twelve rounded feathers.

Bill dusky brown above, lower mandible brownish-yellow, the tip dusky. Iris hazel. Feet flesh-colour, tinged with brown. The general colour of the upper parts is dark reddish-brown, duller, and tinged with grey on the head, indistinctly barred with dark brown; wings and tail undulatingly banded with dark brown, the edges of the outer primaries lighter. The under parts are pale brownish-grey, faintly barred on the fore-neck, breast, and sides, the under tail-coverts distinctly barred.

Length $4\frac{7}{8}$, extent of wings $6\frac{3}{12}$; bill along the ridge $\frac{5}{12}$, along the edge $\frac{8}{12}$; tarsus $\frac{8}{12}$.

This species is most intimately allied to the House Wren, from which it can hardly be distinguished in description, the colours being nearly the same in both. The present species, however, is considerably larger, wants the light coloured line over the eye which is conspicuous in the House Wren, and has the tail much more graduated.

ARBUTUS UVA-URSI, *Willd.* Sp. Pl. vol. ii. p. 618.—DECANDRIA MONOGYNIA, *Linn.*

This small creeping plant grows in pine barrens, and in rocky and mountainous places in the Northern and Eastern States. The berries are scarlet, dry and unpalatable.

House Wren

1 Male 2 Female 3 Young

In an old Hat

Drawn from Nature by J.J. Audubon FRSFLS Lith.d Printed & Col.d by J.T. Bowen Phila.a

THE HOUSE WREN.

TROGLODYTES ÆDON, *Vieill.*

PLATE CXX.—MALE, FEMALE, AND YOUNG.

From whence the House Wren comes, or to what parts it retires during winter, is more than I have been able to ascertain. Although it is extremely abundant in the States of Pennsylvania, New Jersey, Virginia, and Maryland, from the middle of April until the beginning of October, I have never been able to trace its motions, nor do I know of any naturalist in our own country, or indeed in any other, who has been more fortunate.

Its flight is short, generally low, and performed by a constant tremor of the wings, without any jerks of either the body or tail, although the latter is generally seen erect, unless when the bird is singing, when it is always depressed. When passing from one place to another, during the love-season, or whilst its mate is sitting, this sweet little bird flutters still more slowly through the air, singing all the while. It is sprightly, active, vigilant, and courageous. It delights in being near and about the gardens, orchards, and the habitations of man, and is frequently found in abundance in the very centre of our eastern cities, where many little boxes are put up against the walls of houses, or the trunks of trees, for its accommodation, as is also done in the country. In these it nestles and rears its young. It is seldom, however, at a loss for a breeding place, it being satisfied with any crevice or hole in the walls, the sill of a window, the eaves, the stable, the barn, or the upper side of a piece of timber, under the roof of a piazza. Now and then, its nest may be seen in the hollow branch of an apple tree. I knew of one in the pocket of an old broken-down carriage, and many in such an old hat as you see represented in the plate, the little creatures anxiously peeping out or hanging to the side of the hat, to meet their mother, who has just arrived with a spider, whilst the male is on the lookout, ready to interpose should any intruder come near. The same nest is often resorted to for several successive years, merely receiving a little mending.

The familiarity of the House Wren is extremely pleasing. In Pennsylvania a pair of these birds had formed a nest, and the female was sitting in a hole of the wall, within a few inches of my (literally so-called) drawing-room. The male was continually singing within a few feet of my wife and myself, whilst I was engaged in portraying birds of other species. When the

window was open, its company was extremely agreeable, as was its little song, which continually reminded us of its happy life. It would now and then dive into the garden at the foot of the window, procure food for its mate, return and creep into the hole where it had its nest, and be off again in a moment. Having procured some flies and spiders, I now and then threw some of them towards him, when he would seize them with great alacrity, eat some himself, and carry the rest to his mate. In this manner, it became daily more acquainted with us, entered the room, and once or twice sang whilst there. One morning I took it in to draw its portrait, and suddenly closing the window, easily caught it, held it in my hand, and finished its likeness, after which I restored it to liberty. This, however, made it more cautious, and it never again ventured within the window, although it sang and looked at us as at first.

The antipathy which the House Wren shews to cats is extreme. Although it does not attack puss, it follows and scolds her until she is out of sight. In the same manner, it makes war on the Martin, the Blue Bird and the House Swallow, the nest of any of which it does not scruple to appropriate to itself, whenever occasion offers. Its own nest is formed of dry crooked twigs, so interwoven as scarcely to admit entrance to any other bird. Within this outer frame-work grasses are arranged in a circular manner, and the whole is warmly lined with feathers and other equally soft materials. The eggs are five or six, of a regularly oval form, and uniform pale reddish colour. Two broods are raised in the season.

The male seems to delight in attempting to surpass in vocal powers others of his species, during the time of incubation; and is frequently seen within sight of another, straining his little throat, and gently turning his body from side to side, as if pivoted on the upper joints of his legs. For a moment he conceives the musical powers of his rival superior to his own, and darts towards him, when a battle ensues, which over, he immediately resumes his song, whether he has been the conqueror or not.

When the young issue from the nest, it is interesting to see them follow the parents amongst the currant bushes in the gardens, like so many mice, hopping from twig to twig, throwing their tail upwards, and putting their bodies into a hundred different positions, all studied from the parents, whilst the latter are heard scolding, even without cause, but as if to prevent the approach of enemies, so anxious are they for the safety of their progeny. They leave Pennsylvania about the 1st of October.

This species is not found farther eastward along our Atlantic shores than the province of Nova Scotia, where it is not very common, and I suspect that the specimen of a *Troglodytes* procured by Mr. Drummond at the foot of the Rocky Mountains, and described in the Fauna Boreali-Americana,

was the Wood Wren, *T. Americanus*, it being found from Maine to the Rocky Mountains, as well as on the Columbia river, from which specimens have been brought by Mr. TOWNSEND. The House Wren, if I am not greatly mistaken, passes southward of the United States, to spend the winter. The other spends that season within our limits.

Dr. BACHMAN informs me that a bird resembling the Wood Wren, as well as the House Wren, so closely that he could never distinguish it from either species, spends its winters in great numbers in South Carolina. Dr. BREWER has favoured me with the following notice respecting the House Wren. "This bird never constructs with us a distinct nest, but always conceals it in olive-jars, boxes, and such things, placed for its convenience around the houses, or in the hollow of trees. Whenever the places in which they build are larger than necessary, they usually endeavour to fill up the vacant parts with additional materials. I have by me a nest built two years since in the clothes-line box of Professor WARE of Cambridge, which is in size considerably more than a foot square; and it must have cost its tiny architect many days of hard labour to have arranged there such a mass of various materials. The variety and size of some of those of which it is composed is truly surprising. Among them are the exuvia of a snake several feet in length, large twigs, pieces of India-rubber suspenders (which, by the way, are old acquaintances) oak-leaves, feathers, pieces of shavings, hair, hay, &c. It contained six eggs, which evidently were suffered to become stale in consequence of the anxiety of the bird to fill up the empty space." The eggs measure five-eighths of an inch in length, and four and a half eighths in breadth.

HOUSE WREN, *Sylvia domestica*, Wils. Amer. Orn., vol. i. p. 129.
TROGLODYTES ÆDON, Bonap. Syn., p. 92.
HOUSE WREN, Nutt. Man., vol. i. p. 422.
TROGLODYTES ÆDON, *House Wren*, Swains. & Rich. F. Bor. Amer., vol. ii. p. 316.
HOUSE WREN, *Troglodytes ædon*, Aud. Orn. Biog., vol. i. p. 427; vol. v. p. 470.

Adult Male.

Bill of ordinary length, nearly straight, slender, acute, subtrigonal at the base, compressed towards the tip; upper mandible with the ridge obtuse, the sides convex towards the end, concave at the base, the edges acute and overlapping; under mandible with the back and sides convex. Nostrils oblong, straight, basal, with a cartilaginous lid above, open and bare. Head ovate, eyes of moderate size, neck of ordinary length, body ovate, nearly equal in breadth and depth. Legs of ordinary length; tarsus longer than the middle toe, compressed, covered anteriorly with six scutella, posteriorly with a long plate forming an acute angle. Toes scutellate above, inferiorly granulate,

second and fourth nearly equal, the hind toe almost equal to the middle one, third and fourth united as far as the second joint; claws long, slender, acute, arcuate, much compressed.

Plumage soft, tufty, slightly glossed. No bristly feathers about the beak. Wings shortish, broad, rounded: first quill half the length of the second, which is very little shorter than the third and fourth. Tail of ordinary length, of twelve narrow, lax feathers.

Bill dark brown above, yellowish-brown beneath. Iris hazel. Feet flesh-colour. The general colour of the upper parts is reddish-brown, darker on the head, brighter on the tail-coverts, indistinctly barred with dark brown; wings and tail undulatingly banded, tips of the larger wing-coverts whitish. A yellowish-grey line from the upper mandible over the eye; cheeks of the same colour, mottled with brownish-red. Under parts brownish-grey; sides barred with brown, as are the under tail-coverts.

Length $4\frac{1}{4}$ inches, extent of wings $5\frac{1}{2}$; bill along the ridge $\frac{1}{2}$, along the gap $\frac{3}{4}$; tarsus $\frac{2}{3}$, middle toe $\frac{7}{12}$.

Adult Female.

The female scarcely differs from the male in external appearance.

Young Birds.

The young are of a lighter brown, more indistinctly barred, but resemble the old birds in the general distribution of their colouring.

This species differs from the Winter Wren chiefly in having the bill a little stouter, the tail considerably longer, and the under parts less distinctly barred.

WINTER WREN.

TROGLODYTES HYEMALIS, *Vieill.*

PLATE CXXI.—MALE, FEMALE, AND YOUNG.

The extent of the migratory movements of this diminutive bird, is certainly the most remarkable fact connected with its history. At the approach of winter it leaves its northern retreats, perhaps in Labrador or Newfoundland, crosses the inlets of the Gulf of St. Lawrence on tiny concave wings, and betakes itself to warmer regions, where it remains until the

Winter Wren.

1. Male 2. Female 3. Young

Drawn from Nature by J.J.Audubon FRSFLS. Lith^d Printed & Col^d by J.T.Bowen Phila.^a

beginning of spring. Playfully and with alacrity it performs the task, hopping from one stump or fallen log to another, flitting from twig to twig, from bush to bush, here and there flying a few yards; feeding, singing, and bustling on, as if quite careless as to time or distance. It has reached the shore of some broad stream, and here a person ignorant of its habits might suppose it would be stopped; but no, it spreads its wings, and glides over like a meteor.

I have found the Winter Wren in the lower parts of Louisiana, and in the Floridas, in December and January, but never saw one there after the end of the latter month. Their stay in those parts rarely exceeds three months; two more are employed in forming a nest and rearing their broods; and as they leave Labrador by the middle of August at the latest, they probably spend more than half of the year in travelling. It would be interesting to know whether those which breed along the Columbia river, near the Pacific Ocean, visit the shores of our Atlantic States. My friend THOMAS NUTTALL informs me that he occasionally saw the Winter Wren feeding its young in the woods, along the north-west coast.

At Eastport, in Maine, when on my way to Labrador, I found this species in full song, and extremely abundant, although the air was chill, and icicles hung from every rock, it being then the 9th of May. On the 11th of June, I found it equally plentiful in the Magdeleine Islands, and wondered how it could have made its way there, but was assured by the inhabitants that none were ever seen in winter. On the 20th of July, I met with it at Labrador, and again asked myself, how it could possibly have reached those remote and rugged shores? Was it by following the course of the St. Lawrence, or by flying from one island to another across the Gulf? I have seen it in almost every State of the Union, but only twice found it breeding there, once near the Mohawk river in New York, and again in the Great Pine Swamp in Pennsylvania. It breeds abundantly in Maine, and probably in Massachusetts, but few spend the winter even in the latter State.

The song of the Winter Wren excels that of any other bird of its size with which I am acquainted. It is truly musical, full of cadence, energetic, and melodious; its very continuance is surprising, and dull indeed must be the ear that thrills not on hearing it. When emitted, as it often is, from the dark depths of the unwholesome swamp, it operates so powerfully on the mind, that it by contrast inspires a feeling of wonder and delight, and on such occasions has usually impressed me with a sense of the goodness of the Almighty Creator, who has rendered every spot of earth in some way subservient to the welfare of his creatures.

Once when travelling through a portion of the most gloomy part of a thick and tangled wood, in the Great Pine Forest, not far from Mauch Chunk

in Pennsylvania, at a time when I was intent on guarding myself against the venomous reptiles which I expected to encounter, the sweet song of this Wren came suddenly on my ear, and with so cheering an effect, that I instantly lost all apprehension of danger, and pressed forward through the rank briars and stiff laurels, in pursuit of the bird, which I hoped was not far from its nest. But he, as if bent on puzzling me, rambled here and there among the thickest bushes with uncommon cunning, now singing in one spot not far distant, and presently in another in a different direction. After much exertion and considerable fatigue, I at last saw it alight on the side of a large tree, close to the roots, and heard it warble a few notes, which I thought exceeded any it had previously uttered. Suddenly another Wren appeared by its side, but darted off in a moment, and the bird itself which I had followed disappeared. I soon reached the spot, without having for an instant removed my eyes from it, and observed a protuberance covered with moss and lichens, resembling those excrescences which are often seen on our forest trees, with this difference, that the aperture was perfectly rounded, clean, and quite smooth. I put a finger into it, and felt the pecking of a bird's bill, while a querulous cry was emitted. In a word, I had, the first time in my life, found the nest of our Winter Wren. Having gently forced the tenant from his premises, I drew out the eggs with a sort of scoop which I formed. I expected to find them numerous, but there were not more than six, and the same number I afterwards found in the only other nest of this species ever discovered by me. The little bird called upon its mate, and their united clamour induced me to determine upon leaving their treasures with them; but just as I was about going off, it struck me that I ought to take a description of the nest, as I might not again have such an opportunity. I hope, reader, you will believe, that when I resolved to sacrifice this nest, it was quite as much on your account as my own. Externally it measured seven inches in length, four and a half in breadth; the thickness of its walls, composed of moss and lichen, was nearly two inches; and thus it presented internally the appearance of a narrow bag, the wall, however, being reduced to a few lines where it was in contact with the bark of the tree. The lower half of the cavity was compactly lined with the fur of the American Hare, and in the bottom or bed of the nest there lay over this about half a dozen of the large downy abdominal feathers of our Common Grouse, *Tetrao Umbellus*. The eggs were of a delicate blush-colour, somewhat resembling the paler leaves of a partially decayed rose, and marked with dots of reddish-brown, more numerous towards the larger end.

The nest which I found near the Mohawk was discovered by mere accident. One day in the beginning of June, and about noon, feeling fatigued, I sat down on a rock overhanging the water, where, while resting, I might

have the pleasure of watching the motions of some fishes in sight. The damp of the place produced a sudden chillness, and caused me to sneeze aloud, when from beneath my feet there flew off a Winter Wren. The nest, which I soon found, was attached to the lower parts of the rock, and presented the same form and structure as that already described; but it was smaller, the eggs, six in number, contained young far advanced.

The motions of this interesting bird are performed with great rapidity and decision. While searching for food it hops, creeps, and leaps about from one spot to another, as if it derived pleasure from exercise. At each movement it bends its breast downward, so as almost to touch the object on which it stands, and by a sudden extension of its strong feet, aided by the action of its half drooping concave wings, jerks itself forward, keeping its tail elevated all the while. Now through a hollow log it passes like a mouse, now it clings to the surface in various attitudes, suddenly disappears, but presently shews itself by your side; at times it chirrups in a querulous rolling tone, then emits single clear sharp chirps resembling the syllables *tshick*, *tshick*, and again remains silent for a time. It will now and then reach the upper branches of a small tree or a bush, by hopping and leaping from twig to twig; in the course of this transit it will present its opposite sides to you a score of times; and when at length it has gained the summit, it will salute you with its delicate melody, and then dash headlong and be out of sight in a moment. This is almost constantly observed during the spring season, when more than ever its alertness is displayed. On all such occasions, however, whilst in the act of singing, its tail is seen to be depressed. In winter, when it takes possession of the wood-pile, close to the husbandman's dwelling, it will challenge the cat in querulous tones, and peeping out here and there, as it frisks in security, wear out Grimalkin's patience.

The food of the Winter Wren consists chiefly of spiders, caterpillars, and small moths, as well as larvæ. Towards autumn it eats small juicy berries.

Having lately spent a winter at Charleston, in South Carolina, with my worthy friend JOHN BACHMAN, I observed that this little Wren made its appearance in that city and its suburbs in December. On the 1st of January I heard it in full song in the garden of my friend, who informed me that in that State it does not appear regularly every winter, but is sure to be found during very cold weather.

The Winter Wren so closely resembles the European Wren, that I was long persuaded of their identity; but a careful comparison of a great number of specimens, has convinced me that permanent differences in colouring may be pointed out, although still I am not by any means persuaded that they are specifically different.

WINTER WREN, *Sylvia Troglodytes*, Wils. Amer. Orn., vol. i. p. 139.
TROGLODYTES EUROPÆUS, Bonap. Syn., p. 93.
TROGLODYTES HYEMALIS, *Winter Wren*, Swains. & Rich. F. Bor. Amer., vol. ii. p. 318.
WINTER WREN, *Troglodytes hyemalis*, Nutt. Man., vol. i. p. 427.
WINTER WREN, *Troglodytes hyemalis*, Aud. Orn. Biog., vol. iv. p. 430.

Adult Male.

Bill rather long, slender, tapering, acute, nearly straight, subtrigonal at the base, compressed towards the end. Upper mandible with the dorsal outline slightly arched, the ridge narrow, the sides sloping at the base, towards the end slightly convex and erect, the edges sharp, direct, without notæ; lower mandible with the angle narrow and rather acute, the dorsal outline straight, the back narrow, the edges sharp and inflected, the tip very narrow; the gape-line very slightly arched. Nostrils linear-oblong, basal.

Head ovate, of moderate size, neck short; body ovate. Feet of ordinary length; tarsus compressed, with seven anterior scutella, of which the upper are indistinct; toes rather large, compressed; first large, and much longer than the two lateral, which are equal, the third much longer; the third and fourth coherent as far as the second joint of the latter. Claws long, arched, extremely compressed, laterally grooved, acute.

Plumage soft and blended; no bristle-feathers at the base of the bill. Wing shortish, broad, much rounded; first quill very small, being little more than half the length of the second, which is $2\frac{1}{4}$ twelfths shorter than the third; the fourth longest, and exceeding the third by half a twelfth, and the fourth by somewhat less; secondaries long, rounded. Tail short, much rounded, of twelve slightly arched, weak rounded feathers.

Bill dusky brown, with the basal edges of the upper and two-thirds of the lower mandible paler. Iris brown. Tarsi and toes pale greenish-brown, as are the claws. The general colour of the upper parts is reddish-brown, darker on the head, brighter on the tail-coverts, quills, and tail. There is a white spot near the tips of the posterior dorsal feathers. The secondary coverts, and the first small coverts, have each a white spot at the tip. The wing-coverts and quills banded with blackish-brown and brownish-red, the bands of the latter colour becoming reddish-white on the outer five quills. Tail with twelve dusky-bands. The dorsal feathers and scapulars are more faintly barred in the same manner. A brownish-white band from the upper mandible over the eye; the cheeks brown, spotted with brownish-white, the margins of the feathers being of the former colour; the lower parts pale reddish-brown, the sides and abdomen barred with brownish-black and greyish-white; the fore neck and breast more faintly barred; the lower wing-coverts and axillars greyish-white, barred with dusky; the lower tail-coverts brownish-red, barred with dusky and having the tip white.

Parkman's Wren

Male

Pogonia divaricata

Drawn from Nature by J.J.Audubon.F.R.S.F.L.S. lith.Printed & Col.d by J.T.Bowen, Phila.a

Length to end of tail $3\frac{7}{8}$ inches, to end of wings $3\frac{1}{8}$, to end of claws $4\frac{3}{8}$; extent of wings $6\frac{1}{8}$; wing from flexure $1\frac{7}{8}$; tail $1\frac{5}{12}$; bill along the ridge $\frac{5}{12}$; tarsus $\frac{8}{12}$; hind toe $\frac{4}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{6}{12}$, its claw $\frac{2}{12}$. Weight 6 dr.

Female.

The female is somewhat smaller than the male.

Length to end of tail $3\frac{5}{8}$ inches, to end of wings 3, to end of claws $4\frac{2}{8}$; extent of wings $5\frac{3}{8}$; wing from flexure $1\frac{7}{8}$; tail $1\frac{4}{12}$. Weight 4 dr.

Young in autumn.

The upper parts are much darker than in the adult; the lower parts of a deeper tint.

Length to end of tail $3\frac{1}{2}$ inches, to end of wings $3\frac{1}{8}$, to end of claws $4\frac{1}{8}$; extent of wings $5\frac{3}{8}$; wing from flexure $1\frac{5}{8}$.

The young bird just ready to fly, has the bill bright yellow, excepting the ridge of the upper mandible, which is brown; the feet yellowish-brown. The upper parts are reddish-brown, faintly barred with dusky; the wings as in the adult, but the secondary coverts with only a very small dull white spot at the tip, and the first row of coverts with a line of the same colour along the shaft. The lower parts are dull greyish-brown, with the terminal margin of each feather darker, and the sides and hind parts barred with dusky.

PARKMAN'S WREN.

TROGLODYTES PARKMANII, *Aud.*

PLATE CXXII.—MALE.

A single specimen of this Wren which differs considerably from *Troglodytes hyemalis* and *T. europæus*, has been sent to me by Mr. TOWNSEND, who procured it on the Columbia river, along with several others, all exactly similar. The principal difference is in the bill, which is much longer, stouter, and decidedly arched. The wings also are considerably longer, as is the tail in a still greater degree. The plumage is similar, and presents nearly the same markings, but the colours are much paler, and the lower parts nearly greyish-white. This, however, may be merely the effect of the weather. This species may be briefly characterized as follows:

T. Parkmanii. The bill much longer, stouter, and more curved than that of *T. hyemalis;* the upper parts reddish-brown, faintly barred with dusky, the lower parts dull brownish-white; the sides barred with brownish-black and greyish-white, the foreneck and breast with scarcely any markings, the lower wing-coverts and axillars greyish-white, obscurely barred with dusky; the tail half an inch longer than that of the common species, and more rounded.

Bill rather long, slender, tapering; as broad as high at the base, slightly arched, compressed toward the end. Upper mandible with the dorsal outline slightly arched, the ridge narrow, the sides sloping at the base, toward the end slightly convex and erect, the edges sharp, direct, without notch; lower mandible with the angle narrow and rather acute, the dorsal outline decurved in an almost imperceptible degree, the back narrow, the edges sharp and inflected, the tip very narrow; the gape-line slightly arched. Nostrils oblong, basal, operculate.

Head ovate, of moderate size; neck short. Feet of ordinary length; tarsus compressed, with seven anterior scutella, all of which are very distinct; toes rather large, compressed; first large, and much longer than the two lateral, of which the inner is a little shorter; the third and fourth coherent as far as the second joint of the latter. Claws long, arched, extremely compressed, laterally grooved, acute.

Plumage soft and blended; no bristle-feathers at the base of the bill. Wing of moderate length, broad, much rounded; the first quill very small, being only half the length of the second, which is three and a half twelfths shorter than the third; the fourth longest, and exceeding the third by half a twelfth, and the fourth by scarcely a quarter of a twelfth; secondaries long and rounded. Tail rather long, much rounded, the lateral feathers being nearly half an inch shorter than the middle.

Bill dusky brown, with the basal edges of the upper and two-thirds of the lower mandible pale. Tarsi greyish-yellow; toes and claws light brownish. The general colour of the upper parts is reddish-brown, tinged with grey. There is a white spot near the tips of the posterior dorsal feathers. The secondary coverts, and the first small coverts, have each a white spot at the tip. The wing-coverts and quills are banded with blackish-brown and dull brownish-red, the bands of the latter colour paler on the outer quills; the inner webs and tips of all the quills plain brown, as in the other species. All the upper parts are more faintly barred in the same manner. On the tail are twelve dusky bars, as in *T. hyemalis.* A dull whitish band from the upper mandible over the eye; the cheeks whitish, with the basil margins of the feathers brown; the lower parts are dull brownish-white, tinged with grey, the sides brownish, barred with dusky; the fore neck and breast with faint

Marsh Wren.

1. Males. 2 Female & Nest.

indications of bars; the lower wing-coverts and axillaries greyish-white, some of the former with dusky markings; the lower tail-coverts brownish-white, barred with dusky.

Length to end of tail $4\frac{2}{12}$ inches, to end of wings $3\frac{7}{12}$; bill along the ridge $\frac{7}{12}$; wing from flexure $2\frac{1}{4}$; tail $1\frac{11}{12}$; tarsus $\frac{8}{12}$; hind toe $\frac{4\frac{1}{2}}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{6}{12}$, its claw $\frac{2\frac{1}{2}}{12}$.

Feeling perfectly confident that this species is distinct from any other, and not finding it anywhere described, I have named it after my most kind, generous, and highly talented friend GEORGE PARKMAN, Esq., M. D., of Boston, as an indication of the esteem in which I hold him, and of the gratitude which I ever cherish towards him.

PARKMAN'S WREN, *Troglodytes Parkmanii*, Aud. Orn. Biog., vol. v. p. 310. Nuttall, Man., vol. i. p. 483. (Second Edition.)

MARSH WREN.

TROGLODYTES PALUSTRIS, *Wils.*

PLATE CXXIII.—MALE, FEMALE, AND NEST.

The haunts of this interesting little bird are, in the Middle Districts, the margins of rivers at their confluence with the sea, and the adjoining marshes of our Atlantic shores. In such places, the Marsh Wren is found in great numbers, from the beginning of April to the middle of October, when it retires southward, many individuals wintering on the south-western shores of the Floridas, and along the mouths of the Mississippi.

It is a homely little bird, and is seldom noticed, unless by the naturalist, when searching for other species, or by children, who in all countries are fond of birds. It lives entirely amongst the sedges, flags, and other rank plants that cover the margins of the rivers, and the inlets of the sea. Its flight is very low and short, and is performed by a continued flirting of the wings, but without the motions of the tail employed by the Great Carolina Wren. Its song, if song I can call it, is composed of several quickly repeated notes, resembling the grating of a rusty hinge, and is uttered almost continuously during the fore part of the day, the performer standing perched on

the top of a tall weed, from which, on the appearance of an intruder, it instantly dives into the thickest part of the herbage, but to which it returns the moment it thinks the danger over, and renews its merry little song.

The males are extremely pugnacious, and chase each other with great animosity, until one or other has been forced to give way. This disposition is the more remarkable, as these birds build their nests quite close to each other. I have seen several dozen of these nests in the course of a morning ramble, in a piece of marsh not exceeding forty or fifty acres.

The nest is nearly of the size and shape of a cocoa-nut, and is formed of dried grasses, entwined in a circular manner, so as to include in its mass several of the stems and leaves of the sedges or other plants, among which it is placed. A small aperture, just large enough to admit the birds, is left, generally on the south-west side of the nest. The interior is composed of small dry grasses, and is nearly of the depth and width of a common bottle. The eggs, which are from six to eight, are of a regular oval form, and deep chocolate colour, and, from their small size, resemble so many beads. The Marsh Wren raises too broods in the season, and on each occasion forms a new nest. In consequence of this practice, the deserted nests of the year, and those remaining since the preceding season, may be seen in the marshes in every direction, there being scarcely a tuft of tall weeds that is not adorned with one of them.

The food of the Marsh Wren principally consists of minute aquatic insects, and equally diminutive mollusca, which it procures by moving along the blades of the grasses, or the twigs of other plants, which it does with great activity. Indeed, so rapid are its movements among the weeds, that one might easily mistake it for a mouse, did he not observe its tail now and then raised over its back, so as to allow the white under-coverts of the former to become conspicuous.

Although I have shot and examined many birds of this species, I have not found any remarkable differences in the plumage of the sexes.

The young birds assume their full colouring so soon after they leave their nest, that by the time the species departs from the Middle Districts on its way southward, it is hardly possible to distinguish them from the old birds.

A nest of this bird with eggs was seen in the salt marshes of Barnstable by Dr. STORER of Boston. At the south-west pass of the Mississippi, I found it very abundant, in full song, and breeding, on the 1st of April, 1837. At the latter place this species sings during the whole of the night.

MARSH WREN, *Troglodytes palustris*, Wils. Amer. Orn., vol. iii. p. 58.
TROGLODYTES PALUSTRIS, Bonap. Syn., p. 93.
MARSH WREN, *Troglodytes palustris*, Nutt. Man., vol. i. p. 439.

TROGLODYTES PALUSTRIS, *Marsh Wren*, Swains. & Rich. F. Bor. Amer., vol. ii. p. 319.
MARSH WREN, *Troglodytes palustris*, Aud. Orn. Biog., vol. i. p. 500; vol. v. p. 467.

Adult Male.

Bill longish, slightly arched, slender, acute, subtrigonal at the base, compressed towards the tip; upper mandible with the ridge obtuse, the sides convex towards the end, concave at the base, the edges acute and overlapping; under mandible with the sides and back convex. Nostrils oblong, direct, basal, with a cartilaginous lid above, open and bare. Head ovate, eyes rather large, neck of ordinary length, body short and full. Legs of ordinary length; tarsus longer than the middle toe, compressed, covered anteriorly with six scutella, posteriorly with a long plate, forming an acute edge; toes scutellate above, the second and fourth nearly equal, the hind toe almost equal to the middle one, the third and fourth united as far as the second joint; claws rather long, slender, acute, arched, much compressed.

Plumage soft, tufty, slightly glossed. No bristly feathers about the bill. Wings short, broad, rounded: first quill half the length of the second, which is very little shorter than the third and fourth. Tail of ordinary length, much rounded, of twelve rounded feathers.

Bill dark brown above, yellow beneath. Iris hazel. Feet light brown. The general colour of the upper parts is dark brown, the sides of the head deeper, the fore part of the back brownish-black, longitudinally streaked with white, the quills externally margined with lighter brown, the tail barred with dark brown. A white line over the eye, extending down the neck; the sides of the latter mottled with light brown and grey; the under parts of a silvery greyish-white; the abdominal feathers and under tail-coverts tipped with brown.

Length 5 inches, extent of wings $6\frac{1}{4}$; bill along the ridge nearly $\frac{7}{12}$, along the gap $\frac{3}{4}$; tarsus $\frac{5}{8}$, middle toe nearly $\frac{3}{4}$.

Adult Female.

The female differs very little in external appearance from the male. The black of the back is less deep, and the white lines are less conspicuous; the under parts, also, are of a duller white.

SHORT-BILLED MARSH WREN.

TROGLODYTES BREVIROSTRIS, *Nutt.*

PLATE CXXIV.—MALE, FEMALE, AND NEST.

I hope, kind reader, you will approve of the liberty which I have taken in prefixing the name of my friend NUTTALL to the present species, which was discovered by his indefatigable and enthusiastic devotion to science, in a country where WILSON, BONAPARTE, BACHMAN, PICKERING, COOPER, SAY, and others had already exerted themselves to the utmost in their endeavours to complete its diversified and interesting Fauna. I hope, too, that you will allow me to present you with the history of this sweet little inhabitant of our freshwater marshes, as given by him.

"This amusing and not unmusical little species inhabits the lowest marshy meadows, but does not frequent the reed flats. It never visits cultivated grounds, and is at all times shy, timid, and suspicious. It arrives in this part of Massachusetts about the close of the first week in May, and retires to the south by the middle of September at farthest, probably by night, as it is never seen in progress, so that its northern residence is only prolonged about four months.

"Its presence is announced by its lively and quaint song of *tsh, tship, ă dăy, dăy, dăy, dăy,* delivered in haste and earnest at short intervals, either when he is mounted on a tuft of sedge, or while perched on some low bush near the skirt of the marsh. The *tsh, tship,* is uttered with a strong aspiration, and the remainder with a guttural echo. While thus engaged, his head and tail are alternately depressed and elevated, as if the little odd performer were fixed on a pivot. Sometimes the note varies to *tschip, tschip, tshia, dh, dh, dh, dh,* the latter part being a pleasant trill.

"When approached too closely, which not often happened, as he permitted me to come within two or three feet of his station, his song becomes harsh and more hurried, like *tship, dă, dă, dă,* and *de, de, de, de, d, d, dh,* or *tshe, de, de, de, de,* rising into an angry petulant cry, which is also sometimes a low hoarse and scolding *daigh, daigh.* Then again on invading the nest, the sound sinks to a plaintive *tsh, tship, tsh, tship.* In the early part of the breeding season, the male is very lively and musical, and in his best humour he tunes up a *tship, tship, tship, ă dee,* with a pleasantly warbled and reiterated *de.* At a later period, another male uttered little else than a

Short-billed Marsh Wren?

1. Male. 2. Female and Nest.

hoarse and guttural *daigh*, hardly louder than the croaking of a frog. When approached, they repeatedly descend into the grass, where they spend much of their time, in quest of insects, chiefly crustaceous, which, with moths, constitute their principal food. Here unseen they still sedulously utter their quaint warbling; and *tship, tship, a day, day, day, day*, may, for about a month from their arrival, be heard pleasantly echoing on a fine morning, from the borders of every low marsh and wet meadow, provided with tussocks of sedge grass, in which they indispensably dwell, for a time engaged in the cares and gratification of raising and providing for their young.

"The nest of the Short-billed Marsh Wren is made wholly of dry or partly green sedge, bent usually from the top of the grassy tuft in which the fabric is situated. With much ingenuity and labour these simple materials are loosely entwined together into a spherical form, with a small and rather obscure entrance left on the side. A thin lining is sometimes added to the whole, of the linty fibres of the silk-weed, or some other similar material. The eggs, pure white, and destitute of spots, are probably from six to eight. In a nest containing seven eggs, there were three of them larger than the rest, and perfectly fresh, while the four smaller were far advanced towards hatching. From this circumstance we may fairly infer that two different individuals had laid in the same nest, a circumstance more common among wild birds than is generally imagined. This is also the more remarkable, as the male of this species, like many other Wrens, is much employed in making nests, of which not more than one in three or four are ever occupied by the females!

"The summer limits of this species, confounded with the ordinary Marsh Wren, are yet unascertained; and it is singular to remark how near it approaches to another species inhabiting the temperate parts of the southern hemisphere in America, namely the *Sylvia platensis*, figured and indicated by BUFFON. The description, however, of this bird, obtained by COMMERSON, on the banks of La Plata, is too imperfect for certainty. It was found probably in a marshy situation, as it entered the boat in which he was sailing. The time of arrival and departure of this species, agreeing exactly with the appearance of the Marsh Wren of WILSON, inclines me to believe that it also exists in Pennsylvania."

While in New Jersey, in the summer of 1832, after I had become acquainted with this species through NUTTALL, I spent several days in searching the freshwater marshes, often waist-deep in mud, in the hopes of procuring it; but my efforts, as well as those of my friend EDWARD HARRIS, Esq. and my sons, were unsuccessful. It is very abundant in South Carolina, where the Rev. JOHN BACHMAN, myself, and others, have often seen it. Nay, I am of opinion that it spends the winter there, as well as in the

Floridas, as I shot several individuals in February 1833, nine miles from Charleston, at a distance from any river, and on high, usually dry plains, at that season partially covered with water. They did not rise until we had almost walked upon them, and could be shot only on wing, as they flew directly off at the height of a few inches above the grass, and alighted on the first bunch as abruptly as if they had been shot. They then emitted a single rough grating note, quite distinct from that of any other Wren. About this time I received from NUTTALL a letter, which completes the history of this diminutive species.

"Concerning the Short-billed Marsh Wren of which you inquired, I have but little to add to what I have already published; but it is for you to fill up the history of its summer migrations. Did you find it in Maine or Labrador? This season they have been more than usually abundant. Last year (1832) I saw extremely few, and believe many were famished, or some way destroyed by the long continuance of our spring rains. This year (1833) also, several pairs of Marsh Wrens have been seen occupied in making their nests in the reeds, on the margin of Fresh Pond, in our vicinity. These nests are suspended; those of the *short-billed* species always repose directly on the surface of the sedgy tussock of which they are made. The young are easily approached, appearing, by the placid innocence of their manner, as if wholly unconscious of danger. Coleopterous insects are the principal food of the species. I heard once or twice this season, the anxious guttural bubbling sound attributed to the Marsh Wren, mentioned by WILSON. The Short-billed species and the Common, now near the time of their departure for the south, frequents the reeds by Fresh Pond, in little roving companies.—*Cambridge, September* 12, 1833."

I found this small species very abundant in the Texas, where it breeds in such situations as are usually selected by it elsewhere. When within a few feet of them, I observed that whilst the males are singing, the tail is allowed to hang loosely. I mention this because the bird has been represented as elevating its tail while so engaged. Dr. TRUDEAU informs me that he found its nest in the Delaware marshes, and saw both the male and the female near it, but could not procure them, being at the time without a gun. The eggs were four.

SHORT-BILLED MARSH WREN, *Troglodytes brevirostris*, Nutt. Man., vol. i. p. 436.
NUTTALL'S SHORT-BILLED MARSH WREN, *Troglodytes brevirostris*, Aud. Orn. Biog., vol. ii. p. 427; vol. v. p. 469.

Adult Male.

Bill of moderate length, slender, nearly straight, acute, subtrigonal at the

base, compressed towards the end; upper mandible with the dorsal outline slightly arched, the sides convex towards the end, the edges sharp, the tip narrow but rather obtuse; lower mandible also much compressed, with the dorsal line straight, the sides nearly erect and slightly rounded, the sharp edges inflected. Nostrils basal, lateral, oblong, with an arched membrane above, open and bare. Head rather compressed, neck and body short. Legs of ordinary length; tarsus compressed, anteriorly covered with six scutella, posteriorly with a long plate forming a sharp edge; toes scutellate above, the second and fourth nearly equal, the hind toe much stronger, with a much larger claw, the third and fourth united as far as the second joint; claws arched, much compressed, acute.

Plumage soft and blended. No bristly feathers about the bill. Wings short, broad, rounded, first quill about half the length of the second, which is considerably shorter than the third, fourth, and fifth, which are nearly equal, the fourth, however, being the longest. Tail of ordinary length, graduated, of twelve narrow rounded feathers.

Bill dusky above, pale brownish-yellow beneath. Iris dark hazel. Feet pale flesh-colour. The upper parts are blackish-brown, each feather with a brownish-white line along the shaft, and the outer edge towards the end reddish-brown. Wings dusky, the outer edges barred with pale yellowish-brown on the outer webs. Upper tail-coverts and tail similarly barred. Throat and central part of the breast greyish-white, the rest of the lower parts pale reddish-brown, the sides under the wings faintly barred with dusky.

Length $4\frac{3}{8}$ inches, extent of wings $5\frac{5}{8}$; bill along the ridge $\frac{4\frac{1}{2}}{12}$, along the edge $\frac{6}{12}$; tarsus $\frac{8\frac{1}{2}}{12}$.

Adult Female.

The female resembles the male, and the young birds are distinguishable only by having the bill shorter, and the lower parts more tinged with red.

The Common Marsh Wren (Plate 123) is very closely allied to the present species, and the two form part of a group which VIEILLOT distinguishes by the name of Thyrothorus.

FAMILY X. PARINÆ. TITS.

Bill very short or of moderate length, straight, strong, compressed, rather sharp; both mandibles with the dorsal line sloping and slightly convex, the sides convex, the edges sharp; notches obsolete. Nostrils basal, roundish, concealed by the feathers. Head rather large, roundish; neck short; body short, and rather full. Feet of moderate length, rather stout; tarsus rather short, compressed, with eight distinct scutella; toes large, the three anterior united as far as the second joint, the hind toe much stronger and flattened beneath; claws rather long, stout, arched, much compressed, acute. Plumage very soft, blended, and full. Feathers at the base of the bill directed forwards. Wings of moderate length, much rounded, with the first quill very small, the fourth and fifth longest. Tail rather long, slender, of twelve narrow rounded feathers. Tongue emarginate and papillate at the base, abrupt at the tip, with four bristles. Œsophagus narrow, without dilatation; proventriculus oblong; stomach a rather strong oblong gizzard, with the muscles distinct, the epithelium dense, thin, longitudinally rugous; intestine short, of moderate width; cœca very small; cloaca oblong. Trachea simple, with four pairs of inferior laryngeal muscles.

Genus I.—PARUS, *Linn.* TIT.

Bill short, stout; upper mandible with the dorsal line slightly decurved toward the end, the edges overlapping, with a slight lobe or festoon near the base, destitute of notch, rather acute; lower mandible with the dorsal outline slightly convex, the edges direct, the tip rather acute. Nostrils roundish, covered by bristly feathers. Head rather large, roundish; neck short. Feet proportionally large; tarsus of moderate length; hind toe very large and strong; the two lateral nearly equal, the outer adherent at the base; claws large, much compressed, very acute. Wings of moderate length, convex. Tail long, or of moderate length, rounded or graduated, of twelve rather narrow feathers.

Crested Titmouse.

1. Male 2. Female.

White Pine. Pinus Strobus.

CRESTED TITMOUSE.

PARUS BICOLOR, *Linn.*

PLATE CXXV.—MALE AND FEMALE.

Although this smart little bird breeds in the State of Louisiana and the adjacent districts, it is not there found in so great numbers as in the Middle States, and farther to the northward. It generally prefers the depth of the forests during summer, after which it approaches the plantations, and even resorts to the granaries for corn.

Its flight is short, the bird being seldom seen on the wing long enough to cross a field of moderate extent. It is performed by repeated flaps of the wings, accompanied by jerks of the body and tail, and occasions a rustling noise, as it takes place from one tree to another. It moves along the branches, searches in the chinks, flies to the end of twigs and hangs to them by its feet, whilst the bill is engaged in detaching a beech or hazel nut, an acorn or a chinquapin, upon all of which it feeds, removing them to a large branch, where, having secured them in a crevice, it holds them with both feet, and breaks the shell by repeated blows of its bill. They are to be seen thus employed for many minutes at a time. They move about in little companies formed of the parents and their young, eight or ten together, and escorted by the Nuthatch or the Downy Woodpecker. It is pleasing to listen to the sound produced by their labour, which in a calm day may be heard at the distance of twenty or thirty yards. If a nut or an acorn is accidentally dropped, the bird flies to the ground, picks it up, and again returns to a branch. They also alight on the ground or on dry leaves, to look for food, after the trees become bare, and hop about with great nimbleness, going to the margins of the brooks to drink, and when unable to do so, obtaining water by stooping from the extremity of a twig hanging over the stream. In fact, they appear to prefer this latter method, and are also fond of drinking the drops of rain or dew as they hang at the extremities of the leaves.

Their notes are rather musical than otherwise, the usual one being loud and mellow. They do not use the *tee-tee-tee* of their relative the Black-capped Titmouse, half so often as the latter does, but emit a considerable variety of sounds, many of which, if the bird from which they come does not happen to be known to the listener, are apt to induce disappointment in

him, when on going up he finds it to be very different from what he expected. These sounds sometimes resemble a whistle, at another time a loud murmur, and seem as if proceeding from a bird at a much greater distance.

The crest of this species, which is generally erect, is a great improvement to its general appearance, the tints of the plumage being, as you perceive, kind reader, none of the most brilliant. The Crested Titmouse is of a rather vicious disposition, which sometimes prompts it to attack smaller birds, and destroy them by thumping their heads with its bill until it breaks the skull.

This species sometimes forms a nest by digging a hole for the purpose in the hardest wood, with great industry and perseverance, although it is more frequently contented with the hole of the Downy Woodpecker, or some other small bird of that genus. It fills the hole with every kind of warm materials, after which the female deposits from six to eight eggs, of a pure white, with a few red spots at the larger end. The eggs are laid about the beginning of April in the Southern States, and nearly a month later in the Middle Districts. As soon as the young are able to leave the nest, they are seen following the parent birds, and continue with them until the next spring.

My friend Dr. BACHMAN informs me, that he "kept a bird of this species in confinement for some time. It was in the habit of hiding its food in the corner of its cage in a crevice, and at night crept into a small box, where it lay doubled up like a ball till the first light of the morning, when it resumed its restless habits, continually trying to escape from the cage." This species was not seen by Mr. TOWNSEND on the Rocky Mountains, or near the Columbia river; and Dr. RICHARDSON does not mention its occurring in the Fur Countries. I found it abundant in the Texas, and in all our Atlantic States, as well as in Nova Scotia.

In this species as in the rest, the palate is flat, with two longitudinal ridges; the posterior aperture of the nares oblongo-linear; the tongue $3\frac{1}{2}$ twelfths long, emarginate and papillate at the base, flat above, horny toward the end, with three grooves terminating abruptly, and furnished with stiffish bristles. The œsophagus is 2 inches long, and of the uniform width of two-twelfths; the proventriculus a little wider. The stomach is small, elliptical, $4\frac{1}{2}$ twelfths long, $3\frac{1}{2}$ twelfths broad; its lateral muscles moderate; the epithelium longitudinally rugous, and reddish-brown. The intestine is five inches long, from $2\frac{1}{2}$ twelfths to 2 twelfths in width; the cœca extremely small, about 1 twelfth long, and $\frac{1}{4}$ twelfth in width. There is on each side a very slender salivary gland with two ducts.

The trachea is 1 inch $4\frac{1}{2}$ twelfths long, of the uniform width of $1\frac{1}{2}$ twelfths, considerably flattened; its rings 60, the bronchial half rings 12. The muscles as in the Warblers and Thrushes.

The species of pine, on a twig of which you see a pair of these birds, is the *white pine* (*Pinus Strobus*), a tree of great beauty, of which individuals have been observed of the enormous height of 180 feet, with a diameter at the base of from six to eight feet. The trunk is branchless for two-thirds of its height, and affords the most valuable wood perhaps of any tree in the United States.

CRESTED TITMOUSE, *Parus bicolor*, Wils. Amer. Orn., vol. i. p. 137.
PARUS BICOLOR, Bonap. Syn., p. 100.
TUFTED TITMOUSE, *Parus bicolor*, Nutt. Man., vol. i. p. 236.
CRESTED TITMOUSE, *Parus bicolor*, Aud. Orn. Biog., vol. i. p. 199; vol. v. p. 472.

Adult Male.

Bill short, straight, rather robust, compressed, acute; both mandibles with the dorsal outline arched, the upper slightly declinate at the tip. Nostrils basal, roundish, concealed by the recumbent feathers. Head large. Neck and body robust. Feet of ordinary length, rather robust; tarsus compressed, anteriorly scutellate, a little longer than the middle toe; outer toe slightly united at the base, hind one much stronger; claws rather large, much compressed, arched, acute.

Plumage blended, tufty; feathers of the upper part of the head elongated into a crest. Wings of moderate length, the second, third, and fourth quills nearly equal and longest. Tail long, even, of ten rather narrow, rounded feathers.

Bill black. Iris dark brown. Feet lead-colour. The general colour of the upper parts is a dull leaden-blue; the forehead black; sides of the head lighter, and tinged with brown. Under parts greyish-white, sides tinged with yellowish-brown.

Length 6½ inches, extent of wings 9; bill along the ridge ⅓, along the gap ½; tarsus $\frac{11}{12}$, middle toe ¾.

Adult Female.

The female hardly differs from the male in external appearance, being equally crested, and having the same tints.

THE WHITE PINE.

PINUS STROBUS, *Willd.* Sp. Plant., vol. iv. p. 501. *Pursch*, Flor. Amer., vol. ii. p. 644. *Mich.* Arb. Forest. de l'Amer. Sept., vol. i. p. 104, pl. x.—MONŒCIA MONADELPHIA, *Linn.*—CONIFERÆ, *Juss.*

This species, which is a true *pine*, has the leaves very slender, five together, with very short sheaths, and is further characterized by its cylin-

drical, pendulous cones, which are longer than the leaves, and have their scales lax. It grows in rich soil, in all parts of the United States from Canada to Virginia, and affords the best timber for masts, as well as for other purposes. In Britain, where it has long been planted, it is generally known by the name of *Weymouth pine*, or Lord Weymouth's pine, from the name of the nobleman who introduced it.

BLACK-CAP TITMOUSE.

PARUS ATRICAPILLUS, *Linn.*

PLATE CXXVI.—MALE AND FEMALE.

The opinion generally entertained respecting the extensive dispersion of the Black-cap Titmouse, has in all probability originated from the great resemblance which it bears to the Carolina Titmouse, *Parus Carolinensis*, that species being now known to extend its spring and summer migrations as far eastward as the State of New Jersey, where it has been found breeding by my friend EDWARD HARRIS, Esq. of Moorestown. The Black-cap, on the other hand, is rarely observed farther south, and then only in winter, when it proceeds as far as beyond the middle portions of Maryland, from whence I have at that season received specimens in spirits, collected by my friend Colonel THEODORE ANDERSON of Baltimore. Westward of the Alleghanies it extends as far as Kentucky in winter, but at the approach of spring returns northward. In Pennsylvania and New Jersey some are known to breed; but as the Carolina Titmouse breeds there also, it is difficult to say which of them is the most numerous, they being so like each other that one is apt to confound them. In the State of New York it is abundant, and often rears two broods in the season; as you proceed eastward you may observe it in all places favourable to its habits; and, according to Dr. RICHARDSON, it is found as far north as lat. 65°, it being in the Fur Countries the most common bird, "a small family inhabiting almost every thicket." None were seen by Mr. TOWNSEND either on the Rocky Mountains or about the Columbia river, where, on the contrary, *Parus Carolinensis* is abundant, as it is also in the Texas, where I found it breeding in the spring of 1837. Although bearing a considerable resemblance to the

Black cap Titmouse.

1. Male. 2. Female.

Plant. Sweet briar.

Drawn from Nature by J.J. Audubon, F.R.S. F.L.S.

Lith.ᵈ Printed & Col.ᵈ by J. T. Bowen. Philad.ᵃ

Marsh Titmouse of Europe, *P. palustris*, it differs from that species not only in colour, but more especially in its habits and notes.

Hardy, smart, restless, industrious, and frugal, the Black-cap Titmouse ranges through the forest during the summer, and retiring to its more secluded parts, as if to ensure a greater degree of quiet, it usually breeds there. Numerous eggs produce a numerous progeny, and as soon as the first brood has been reared, the young range hither and thither in a body, searching for food, while their parents, intent on forming another family, remain concealed and almost silent, laying their eggs in the hole deserted by some small Woodpecker, or forming one for themselves. As it has been my fortune to witness a pair at this work, I will here state what occurred, notwithstanding the opinion of those who inform us that the bill of a Titmouse is "not shaped for digging." While seated one morning under a crab-apple tree (very hard wood, reader), I saw two Black-cap Titmice fluttering about in great concern, as if anxious to see me depart. By their manners indeed I was induced to believe that their nest was near, and, anxious to observe their proceedings, I removed to the distance of about twenty paces. The birds now became silent, alighted on the apple-tree, gradually moved towards the base of one of its large branches, and one of them disappeared in what I then supposed to be the hole of some small Woodpecker; but I saw it presently on the edge, with a small chip in its bill, and again cautiously approached the tree. When three or four yards off I distinctly heard the peckings or taps of the industrious worker within, and saw it come to the mouth of the hole and return many times in succession in the course of half an hour, after which I got up and examined the mansion. The hole was about three inches deep, and dug obliquely downward from the aperture, which was just large enough to admit the bird. I had observed both sexes at this labour, and left the spot perfectly satisfied as to their power of boring a nest for themselves.

The Black-cap Titmouse, or Chickadee, as it is generally named in our Eastern States, though exceedingly shy in summer or during the breeding season, becomes quite familiar in winter, although it never ventures to enter the habitations of man; but in the most boisterous weather, requiring neither food nor shelter there, it may be seen amidst the snow in the rugged paths of the cheerless woods, where it welcomes the traveller or the woodcutter with a confidence and cheerfulness far surpassing the well-known familiarity of the Robin Redbreast of Europe. Often, on such occasions, should you offer it, no matter how small a portion of your fare, it alights without hesitation, and devours it without manifesting any apprehension. The sound of an axe in the woods is sufficient to bring forth several of these busy creatures, and having discovered the woodman, they seem to find

pleasure in his company. If, as is usually the case, he is provided with a dinner, the Chickadee at once evinces its anxiety to partake of it, and loses no opportunity of accomplishing its object, although it sets about it with much circumspection, as if it were afraid of being detected, and brought to punishment. A woodcutter in Maine assured me, that one day he happened to be at work, and had scarcely hung up his basket of provisions, when it was observed by a flock of these birds, which, having gathered into it at once, attacked a piece of cold beef; but after each peck, he saw their heads raised above the edge, as if to guard against the least appearance of danger. After picking until they were tired or satisfied, they left the basket and perched directly over his fire, but out of the direction of the smoke. There they sat enjoying themselves and ruffling their feathers to allow the warmth more easy access to their skin, until he began his dinner, when they immediately alighted near him, and in the most plaintive tones seemed to solicit a portion.

Wilson and others have spoken of this species as being addicted to moving in the company of our smaller Woodpeckers and Brown Creepers, and this in such a way as to induce most readers to believe the act to be customary; but I have often found groups of them, at times composed of more than a dozen, without any such companions, and I should be more inclined to think that the Downy Woodpecker, and the Brown Creeper, seek the company of the Titmice, rather than that the latter associate with them. Often indeed have I watched the busy Chickadees, as they proceeded from tree to tree, and from branch to branch, whether by the road-side or in the interior of the forest, when no other birds were with them. The light rustling sound of their concave wings would intimate their approach as well as their retreat, as gaily one after another they passed onwards from one spot to another, chattering, peeping everywhere, and determined as it were, not to suffer a chink to pass without inspection. Now hanging, back downward, at the extremity of a twig, its feet almost up to its bill, it would peck at a berry or a seed until it had devoured it, or it had fallen to the ground: should the latter be the case, the busy bird would at once fly down, and hammer at the fruit. To the Black-cap Titmouse the breaking of a hazel-nut is quite a pleasure, and I have repeatedly seen the feat accomplished not only by a bird in its natural state, but by one kept in confinement. Courageous and at times exceedingly tyrannical, it will attack young birds, break their skulls, and feed upon their flesh, as I have more than once witnessed. In this habit they resemble the Jays, but in every other they differ entirely from those birds, although the Prince of Musignano has thought fit to assimilate the two groups. The Chickadee feeds on insects, their larvæ, and eggs, as well as on every sort of small fruit, or berries,

including grapes, acorns, and the seeds of various pines. I have seen them eat the seeds of the sunflower, the pokeberry, and pears, as well as flesh of all kinds. Indeed it may be truly called omnivorous. Often, like Jays, you may see them perched as it were upon their food, and holding it beneath their feet while pecking at it; but no Jays are seen to hang head downwards at the end of a branch.

My friend Thomas M'Culloch, Esq. of Halifax, in Nova Scotia, has favoured me with the following interesting remarks having reference to this species. "Sometimes I have been inclined to think, that the sight of this bird is comparatively imperfect, and that it is chiefly indebted to some of the other senses for its success in obtaining subsistence. This idea may not be correct, but it seems to derive some support from the little incident which I am about to mention. While standing at the edge of a patch of newly-felled wood, over which the fire had recently passed, and left every thing black in its course, I observed a small flock of these birds coming from the opposite side of the clearing. Being dressed in black and aware of their familiarity, I stood perfectly motionless, for the purpose of ascertaining how near they would approach. Stealing from branch to branch, and peering for food among the crevices of the prostrate trunks, as they passed along, onward they came until the foremost settled upon a small twig a few feet from the spot upon which I stood. After looking about for a short time it flew and alighted just below the lock of a double-barrelled gun which I held in a slanting direction below my arm. Being unable however to obtain a hold, it slided down to the middle of the piece, and then flew away, jerking its tail, and apparently quite unconscious of having been so near the deadly weapon. In this country these birds seem to be influenced by a modification of that feeling by which so many others are induced to congregate at the close of autumn and seek a more congenial clime. At that period they collect in large flocks and exhibit all the hurry and bustle of travellers, who are bent upon a distant journey. If these flocks do not migrate, their union is soon destroyed, for when the Black-cap Titmice again appear, it is in small flocks; their former restlessness is gone, and they now exhibit their wonted care and deliberation in searching for food."

The nest of this species, whether it be placed in the hole of a Woodpecker or squirrel, or in a place dug by itself, is seldom found at a height exceeding ten feet. Most of those which I have seen were in low broken or hollowed stumps only a few feet high. The materials of which it is composed vary in different districts, but are generally the hair of quadrupeds, in a considerable quantity, and disposed in the shape of a loose bag or purse, as in most other species which do not hang their nests outside. Some persons have said that they lay their eggs on the bare wood, or on the chips left by

Woodpeckers; but this is not the case, in so far as I have examined them; and in this my observations are confirmed by those of Dr. BREWER of Boston and Mr. M'CULLOCH of Halifax, who also have inspected nests of this species. The eggs rarely exceed eight in number; they measure five-eighths of an inch in length, by three-eighths and three-quarters, are rather pointed at the smaller end, white, slightly sprinkled with minute dots and markings of light reddish. Those of the first brood are deposited from the middle of April to that of May; for the second about two months later. The parents I have thought generally move along with the young of the second brood.

Dr. BREWER says, "on the 20th of June, I found in a single Titmouse's hole a mass of the hair of the common skunk and moss large enough to weigh two or more ounces, and sufficient to construct a nest for some of our larger birds, such for instance as Wilson's Thrush."

Mr. M'CULLOCH found a nest of this bird placed about two feet from the ground in a small stump, which seemed to have been excavated by the birds themselves. It contained six young, and was lined entirely with the hair which cattle, in rubbing themselves, had left upon the stump.

The flight of this species, like that of all our American Titmice, is short, fluttering, generally only from tree to tree, and is accompanied with a murmuring sound produced by the concavity of the wings. It is seldom seen on the ground, unless when it has followed a fruit that has fallen, or when searching for materials for its nest. It usually roosts in its nest during winter, and in summer amid the close foliage of firs or evergreens. In winter, indeed, as well as often in autumn, it is seen near the farm-houses, and even in villages and towns, busily seeking for food among the trees.

"On seeing a cat, or other object of natural antipathy," says Mr. NUTTALL, "the Chickadee, like the peevish Jay, scolds in a loud, angry, and hoarse note, *'tshe, dăigh dăigh dăigh.* Among the other notes of this species, I have heard a call like *tshe-de-jay, tshe-de-jay,* the two first syllables being a slender chirp, with the *jay* strongly pronounced. The only note of this bird which may be called a song, is one which is frequently heard at intervals in the depths of the forest, at times of day usually when all other birds are silent. We then may sometimes hear in the midst of this solitude two feeble, drawling, clearly whistled, and rather melancholy notes like *'te-dĕrry,* and sometimes *ye-pĕrrit,* and occasionally, but more rarely in the same wiry, whistling, solemn tone, *'phēbé.* The young in winter also sometimes drawl out these contemplative strains. In all cases the first syllable is very high and clear, the second word drops low, and ends like a feeble plaint. This is nearly all the quaint song ever attempted by the Chickadee. On fine days, about the commencement of October, I have heard the Chickadee sometimes,

for half an hour at a time, attempt a lively, petulant warble, very different from his ordinary notes. On these occasions he appears to flirt about, still hunting for his prey, in an ecstasy of delight and vigour. But after awhile the usual drawling note again occurs. These birds, like many others, are very subject to the attacks of vermin, and they accumulate in great numbers around that part of the head and front which is least accessible to their foot."

BLACK-CAPT TITMOUSE, *Parus atricapillus*, Wils. Amer. Orn., vol. i. p. 134.
PARUS ATRICAPILLUS, Bonap. Syn., p. 100.
BLACK-CAPT TITMOUSE, Nutt. Man., p. 241.
BLACK-CAPT TITMOUSE, *Parus atricapillus*, Aud. Orn. Biog., vol. iv. p. 374.

Adult Male.

Bill short, straight, strong, compressed, rather obtuse; both mandibles with the dorsal line slightly convex, the sides sloping and convex, the edges sharp, that of the upper mandible slightly sinuate. Nostrils basal, roundish, concealed by the recumbent feathers. Head large, neck short, body robust. Feet of ordinary length, rather robust; tarsus compressed, with seven anterior scutella; toes large, the three anterior united as far as the second joint; the hind one much stronger, and with its claw nearly as long as the middle toe. Claws large, arched, much compressed, acute.

Plumage blended, tufty; feathers of the head glossy. Wings of moderate length, the first quill scarcely half the length of the second, which is equal to the first secondary, the third and seventh about equal, the fourth and fifth equal and longest. Tail long, a little arched, emarginate and rounded, of twelve slender rounded feathers.

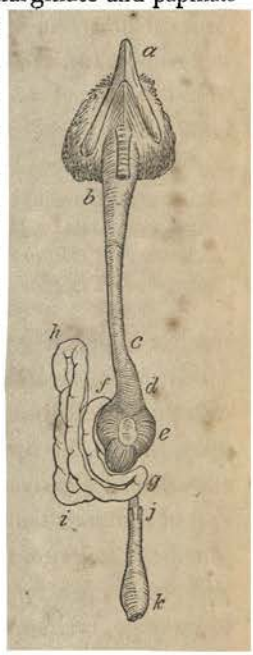
Bill brownish-black. Iris dark brown. Feet greyish-blue, as are the claws. The whole upper part of the head and the hind neck pure black, as is a large patch on the throat and fore-neck. Between these patches of black is a band of white, from the base of the bill down the sides of the neck, becoming broader behind, and encroaching on the back, which, with the wing-coverts, is ash-grey tinged with brown. Quills dark greyish-brown, margined with bluish-white, the secondary quills so broadly margined as to leave a conspicuous white dash on the wing; tail of the same colour, the feathers similarly edged. Lower parts brownish-white, the sides pale yellowish-brown.

Length to end of tail $5\frac{1}{8}$ inches, to end of wings $3\frac{7}{8}$, to end of claws $4\frac{1}{2}$; extent of wing $8\frac{1}{4}$; wing from flexure $2\frac{10}{12}$; tail $2\frac{9}{12}$; these measurements taken from three males. In another, the bill along the ridge $\frac{4}{12}$, along the edge of lower mandible $\frac{7}{12}$; tarsus $\frac{7}{12}$; hind toe $\frac{3}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{5}{12}$, its claw $\frac{3}{12}$.

Adult Female.

The Female is similar to the male.

Male examined. The tongue is $4\frac{1}{2}$ twelfths long, emarginate and papillate at the base, flat above, depressed, tapering, the point horny, slit, with four bristly points. Œsophagus, *b*, *c*, *d*, $1\frac{1}{2}$ inches long, tapering at the commencement to the diameter of 2 twelfths, and then continuing nearly uniform, without dilatation; the proventriculus, *c*, *d*, is not much enlarged. The stomach, *d*, *e*, is a strong gizzard, of an oblong form or ovate, 4 twelfths long, 3 twelfths broad, with strong lateral muscles; its epithelium longitudinally rugous, and of a dark reddish-brown colour. Intestine $7\frac{1}{4}$ inches long, the diameter of its duodenal portion, *f*, *g*, *h*, $2\frac{1}{2}$ twelfths. The rectum, *g*, *k*, is $7\frac{1}{2}$ twelfths long; the cœca, *j*, 1 twelfth long, and $\frac{1}{4}$ twelfth in diameter.



The trachea is $1\frac{2}{12}$ inches long, its diameter uniform, $\frac{3}{4}$ twelfths, its rings 42. It is furnished with lateral or contractor muscles, sterno-tracheal, and four pairs of inferior laryngeal. Bronchi short, of about 10 rings.

CAROLINA TITMOUSE.

PARUS CAROLINENSIS, *Aud.*

PLATE CXXVII.—MALE AND FEMALE.

It was not until 1833 that I discovered the difference as to size and habits between this bird and the Black-cap Titmouse, which inhabits the Middle and Northern States, and which has been so well described by WILSON, NUTTALL and SWAINSON. Indeed, I never was struck with the difference of size until I reached Eastport in the State of Maine, early in May 1833, when one morning my friend Lieutenant GREEN of the United States army entered my room and shewed me a Titmouse which he had just procured.

Carolina Titmouse

1 Male. 2. Female

Plant. Sapple Jack!

Drawn from Nature by J.J. Audubon FRSFLS

Lith.ª Printed & Col.ª by J.T. Bowen, Phila.ª

The large size of his bird, compared with those met with in the south, instantly struck me.

On my return from Labrador, I immediately proceeded to Charleston in South Carolina, with a view of once more visiting the western portions of the Floridas and the whole coast of the Gulf of Mexico. In the course of conversation with my friend, the Reverend JOHN BACHMAN, I mentioned my ideas on the subject of Titmice, when he immediately told me that he had for some time been of the same mind. We both went to the woods, and procured some specimens. I wrote to several persons of my acquaintance in Massachusetts, Maine, and Maryland, and before a month had elapsed, I received an abundant supply of the Northern species, preserved in spirits, from my friend JOHN M. BETHUNE of Boston, Lieutenant GREEN, and Colonel THEODORE ANDERSON of Baltimore. We examined and compared many individuals of both species, and satisfied ourselves that they were indeed specifically distinct.

This new species, the Carolina Titmouse, is a constant inhabitant of the Southern States, in which I have traced it from the lower parts of Louisiana through the Floridas as far as the borders of the Roanoke river, which separates North Carolina from Virginia; and it is now ascertained that this species reaches eastward as far as the State of New Jersey, where it has been procured by my friend EDWARD HARRIS. In general it is found only in the immediate vicinity of ponds and deep marshy and moist swamps, rarely during winter in greater numbers than one pair together, and frequently singly. The parent birds separate from the young probably soon after the latter are able to provide for themselves. The other species moves in flocks during the whole winter, frequenting the orchards, the gardens, or the hedges and trees along the roads, entering the villages, and coming to the wood-piles of the farmers. The southern species is never met with in such places at any time of the year, and is at all seasons a shyer bird, and more difficult to be obtained. Its notes are also less sonorous, and less frequent, than those of the Titmouse found in the Middle and Northern Districts.

My friend JOHN BACHMAN is of opinion that the smaller species partially retires from South Carolina during winter, in consequence of the small number met with there at that season. On referring to my journals, written in the Floridas, in the winter of 1831-32, I find that they are mentioned as being much more abundant than in the Carolinas, and as breeding in the swamps as early as the middle of February.

The Carolina Titmouse breeds in the holes abandoned by the Brown-headed Nuthatch; but I have not yet examined either its eggs or its nest, having at first carelessly supposed the bird to be identical with the northern species, as my predecessors had done.

My drawing of the Carolina Titmouse was made not far from New Orleans late in 1820. I have named it so, partly because it occurs in Carolina, and partly because I was desirous of manifesting my gratitude towards the citizens of that State, who by their hospitality and polite attention have so much contributed to my comfort and happiness, whenever it has been my good fortune to be among them.

A nest was presented to me by Dr. BACHMAN, who found it in a hollow stump, at the height of about four feet from the ground, is cup-shaped, two inches in diameter at the mouth internally, three externally, its depth two inches. It is composed of fine wool, cotton, and a few fibres of plants, felted together so as to be of uniform thickness throughout. The eggs are pure white.

CAROLINA TITMOUSE, *Parus Carolinensis*, Aud. Orn. Biog., vol. ii. p. 341; vol. v. p. 474.

Adult Male.

Bill very short, straight, strong, compressed, rather obtuse; both mandibles with the dorsal outline slightly convex, the sides convex, the edges sharp. Nostrils basal, roundish, concealed by the recumbent feathers. Head large, neck short, body rather robust. Feet of ordinary length, rather robust; tarsus compressed, anteriorly scutellate; toes large, the three anterior united as far as the second joint, the hind one much stronger; claws rather large, compressed, arched, acute.

Plumage blended, tufty; feathers of the head glossy. Wings of moderate length, the third and fourth quills longest and equal, fifth little shorter, second longer than sixth, first and seventh about equal. Tail long, slender, slightly incurved, rounded, of twelve narrow, rounded feathers.

Bill black. Iris dark brown. Feet bluish-grey. The whole upper part of the head and the hind neck pure black, as is a large patch on the throat and fore neck. Between these patches of black, there is a band of greyish-white, from the base of the bill down the side of the neck, becoming broader and greyer behind. Back and wing-coverts ash-grey, tinged with brown. Quills brown, margined with greyish-blue, as is the tail, which is more tinged with grey. Lower parts greyish-white, tinged with brown, the sides more deeply tinted.

Length $4\frac{1}{4}$ inches, extent of wings 6; bill along the ridge $\frac{3}{12}$, along the edge $\frac{5}{12}$; tarsus $\frac{6\frac{1}{2}}{12}$.

Adult Female.

The female is similar to the male, but somewhat fainter in its tints.

Hudson's Bay Titmouse.

1. Male. 2. Female. 3. Young.

Drawn from Nature by J. J. Audubon F.R.S.F.L.S.

Lith.d Printed & Col.d by J. T. Bowen, Phila.a

The Supple Jack.

The *supple jack* is a species of *smilax* extremely abundant in all the swampy portions of the Southern States. Its slender stem entwines the trunk and branches of even the tallest trees, and, with its delicate branches, is extremely tough and pliant, one of half an inch in diameter being strong enough to suspend a body having a weight of several hundred pounds. It is frequently used instead of a cord to hang clothes upon to dry. The festoons which it forms are graceful and pleasing to the eye.

HUDSON'S BAY TITMOUSE.

Parus Hudsonicus, *Lath.*

PLATE CXXVIII.—Male, Female, and Young.

Nothing ever gave me more pleasure than the meeting with a bird long since discovered, at a time when I could fully study its habits. I had frequently searched for this interesting little Titmouse in the State of Maine, where it breeds, but always without success, nor was it until I visited Labrador, that I had an opportunity of seeing it.

On the 18th of July, after an early breakfast (at three o'clock), my party, accompanied by our captain and myself, left the Ripley in three boats for the main shore, distant about five miles. Although the fog was thick, the wind was fair, and we reached the land in safety, when we immediately commenced our search for birds. Having traversed an extensive marsh, without finding any thing of interest, the captain and I, fatigued and depressed by our want of success, retired to what in that country is called a wood, with the hope of mending our fortune. We separated and with great difficulty made our way among the stubborn tangled trees. Only a few minutes had elapsed when the report of my companion's gun reached my ear, and I at the same time heard him shout to me to come up as quickly as possible. This I managed to do after awhile, and with much tugging and tearing; but as I approached him I heard with joy the notes of the Canada Titmouse. One had been shot, and a nest had been found. Securing both

the parents and the young, which had leaped out on hearing the guns, we sat down to examine the curious fabric the birds had reared for their brood.

The nest was placed at the height of not more than three feet from the ground, in the hollow of a decayed low stump, scarcely thicker than a man's leg, the whole so rotten that it crumbled to pieces on being touched. I cautiously removed the woody enclosure, and took possession of the nest, which I obtained in perfect order. It was shaped like a purse, eight inches in depth, two in diameter inside, its sides about half an inch thick. It was entirely composed of the finest fur of different quadrupeds, but principally of the great northern hare, so thickly and ingeniously matted throughout, that it looked as if it had been felted by the hand of man. It was quite elastic throughout, and rather wider at the bottom, probably in consequence of the natural growth of the young. The captain told me that he had seen the parents enter the stump, and that on his walking towards it he was immediately assailed, not only by the owners of the nest, but by several other pairs of the same species, all of which, however, had retired when I reached the spot. It is probable they had nests in the vicinity, but we did not succeed in finding any. The male, which was shot last, several times flew at me so close, that I attempted to catch it alive, but it always eluded my grasp with dexterity, perched on a low branch, and emitted its angry *te-te-te-tee.* The young I carried on board alive.

This hardy little bird resembles in its manners the other species of its interesting and beautiful tribe; but as the habits of our Titmice are well known, and have been already spoken of by me, I shall not here trouble you with unnecessary repetitions. Its notes resemble those of the Carolina Titmouse, but are much weaker.

This species is much scarcer in those parts of Labrador which I visited than in Newfoundland, where I found it as abundant as our northern Black-headed Titmouse. The old and young birds were moving in groups in the direction of Nova Scotia, whither I suppose they all retire in the autumn, and where I have seen the species along the roads between Halifax and Windsor. Many breed in that province, as well as in New Brunswick, and, as I have said, in Maine, where my young friend LINCOLN has at times found them. None have ever been seen as far south as even Massachusetts.

I have represented the male, the female, and the young, in the plumage in which I found them. The brown of the head is much duller in winter than in summer. The young do not acquire it until towards the spring following their birth.

PARUS HUDSONICUS, Lath. Ind. Orn., vol. ii. p. 566.
HUDSON'S BAY TITMOUSE, Aud. Orn. Biog., vol. ii. p. 543.

Adult Male, in summer.

Bill short, straight, of moderate strength, somewhat conical, compressed towards the end; both mandibles with the dorsal outline a little convex, the sides sloping and slightly convex, the edges sharp, the tip acute. Nostrils basal, roundish, concealed by the recumbent feathers. The general form is slender. Feet proportionally large; tarsus of moderate length, anteriorly covered with a few long scutella, and sharp behind; hind toe very large and strong, the two lateral nearly equal, the outer united at the base with the middle; claws large, arched, much compressed, very acute.

Plumage blended, tufty. Wings of moderate length, the fourth quill longest, fifth almost equal, third scarcely shorter than fourth, first very short. Tail long, much rounded, of twelve rather narrow, rounded feathers.

Bill black. Iris very dark brown. Feet lead-colour. The general tint of the upper parts is dull leaden, tinged with light brown, the head umber-brown; primaries edged with pale greyish-blue. The throat and fore neck are deep black, that colour being separated from the brown of the head by a broad band of white running under the eye. The breast and belly greyish-white, the sides light yellowish-brown.

Length 5 inches, extent of wings 7; bill along the ridge $\frac{3\frac{1}{2}}{12}$, along the edge $\frac{5}{12}$; tarsus $\frac{7}{12}$, middle toe with the claw $\frac{6}{12}$, hind toe the same.

Adult Female, in summer.

The female resembles the male, but the upper parts are deeply tinged with brown, and the head and throat are of a lighter tint.

Young fully fledged.

Bill greyish-blue. Upper parts of a dull greenish-grey. The throat marked as in the adult, the under parts pale greyish, tinged with brown.

The plant represented in this plate is abundant in Labrador, Newfoundland, and our Northern States. It is a species of *Prunus*, and attains a height of eight or ten feet.

CHESTNUT-BACKED TITMOUSE.

PARUS RUFESCENS, *Towns.*

PLATE CXXIX.—MALE AND FEMALE.

Mr. NUTTALL's notice respecting the present species is as follows:—

"The Chestnut-backed Titmouse is seen throughout the year in the forests of the Columbia, and as far south as Upper California, in all which tract it breeds, forming, as I have some reason to believe, a pendulous, or at least an exposed nest, like some of the European species. It is made of large quantities of hypna and lichens, and copiously and coarsely lined with deer's hair and large feathers, such as those of the Grouse and the Jay. They are commonly seen in small flocks of all ages in the autumn and winter, when they move about briskly, and emit a number of feeble querulous notes, after the manner of the Chickadee, or common species, *Parus atricapillus*, but seldom utter any thing like a song, though now and then, as they glean about, they utter a *t'she, de, de,* or *t'dee, t'dee, dee,* their more common querulous call, however, being like *t'she, dé, de, vait, t'she, de, de, vait,* sometimes also a confused warbling chatter. The busy troop, accompanied often by the common species, the *Regulus tricolor*, and the small yellow-bellied *Parus*, are seen flitting through bushes and thickets, carefully gleaning insects and larvæ for an instant, and are then off to some other place around, proceeding with restless activity to gratify the calls of hunger and the stimulus of caprice. Thus they are seen to rove along for miles together, until satisfied or fatigued, when they retire to rest in the recesses of the darkest forests, situations which they eventually choose for their temporary domicile, where in solitude and retirement they rear their young, and for the whole of the succeeding autumn and winter remain probably together in families. When the gun thins their ranks, it is surprising to see the courage, anxiety, and solicitude of these little creatures: they follow you with their wailing scold, and entreat for their companions in a manner that impresses you with a favourable idea of their social feelings and sympathy."

Mr. TOWNSEND says, that "the Chinook Indians call this species *a kul.* It inhabits the forests of the Columbia river, where it breeds and goes in flocks in the autumn, more or less gregarious through the season. The legs and feet are light blue."

Chesnut backed Titmouse

1. Male. 2. Female.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.d Printed & Col.d by J.T.Bowen, Phila.a

PARUS RUFESCENS, CHESTNUT-BACKED TITMOUSE, Towns. Journ. Acad. Nat. Sc. Philadelphia, vol. vii. p. 190.

CHESTNUT-BACKED TITMOUSE, *Parus rufescens*, Aud. Orn. Biog., vol. iv. p. 371.

Adult Male.

Bill very short, straight, strong, compressed, rather acute; both mandibles with the dorsal line slightly convex, the sides sloping and convex, the edges sharp, the tip of the upper scarcely longer. Nostrils basal, roundish, concealed by the recumbent feathers. Head large, ovate; neck short; body rather robust. Feet of ordinary length, robust; tarsus compressed, with seven anterior scutella, and two lateral plates meeting behind so as to form a thin edge; toes large, the three anterior united as far as the second joint, the hind one much stronger, and with its claw as long as the third. Claws large, arched, much compressed, acute.

Plumage blended, tufty, unglossed. Wings of moderate length, the fourth and fifth quills equal and longest, the sixth scarcely shorter, the third and seventh equal, the second and eighth equal, the first very short, being only half the length of the second. Tail long, slender, arched, very slightly emarginate, or with its tip divaricate, of twelve rather narrow feathers.

Bill brownish-black, with the edges and tip paler. Feet greyish-blue; claws paler. Head and neck, and fore part of the sides, dark brown, with a broad longitudinal band of white on each side, from the bill under the eye, curving up on the shoulder, and almost meeting on the back; which, including the rump, is bright chestnut, as are the sides under the wings; the middle of the breast and abdomen greyish-white, the lower tail-coverts tinged with chestnut. Wings and tail brownish-grey, the smaller coverts tinged with chestnut, the secondary coverts margined and tipped with greyish-white, of which colour also are the outer edges of the quills, except the first; tail-feathers faintly margined with bluish-grey.

Length to end of tail $4\frac{1}{2}$ inches; wing from flexure $2\frac{3}{8}$; tail $1\frac{11}{12}$; bill along the ridge $\frac{4\frac{1}{2}}{12}$; tarsus $\frac{7\frac{1}{2}}{12}$; hind toe $\frac{3\frac{1}{2}}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{4\frac{1}{2}}{12}$, its claw $\frac{2\frac{3}{4}}{12}$.

Adult Female.

The Female is similar to the male.

CHESTNUT-CROWNED TITMOUSE.

PARUS MINIMUS, *Towns.*

PLATE CXXX.—MALE AND FEMALE.

My friend NUTTALL's account of this Titmouse is as follows. "We first observed the arrival of this plain and diminutive species on the banks of the Wahlamet, near to its confluence with the Columbia, about the middle of May. Hopping about in the hazel thickets which border the alluvial meadows of the river, they appeared very intent and industriously engaged in quest of small insects, chirping now and then a slender call of recognition. They generally flew off in pairs, but were by no means shy, and kept always in the low bushes or the skirt of the woods. The following day I heard the males utter a sort of weak monotonous short and quaint song, and about a week afterwards I had the good fortune to find the nest, about which the male was so particularly solicitous as almost unerringly to draw me to the spot, where hung from a low bush, about four feet from the ground, his little curious mansion, formed like a long purse, with a round hole for entrance near the summit. It was made chiefly of moss, down, lint of plants, and lined with some feathers. The eggs, six in number, were pure white, and already far gone towards being hatched. I saw but few other pairs in this vicinity, but on the 21st of June, in the dark woods near Fort Vancouver, I again saw a flock of about twelve, which, on making a chirp something like their own call, came around me very familiarly, and kept up a most incessant and querulous chirping. The following season (April 1836) I saw numbers of these birds in the mountain thickets around Santa Barbara, in Upper California, where they again seemed untiringly employed in gleaning food in the low bushes, picking up or catching their prey in all postures, sometimes like the common Chickadee, head downwards, and letting no cranny or corner escape their unwearied search. As we did not see them in the winter, they migrate in all probability throughout Mexico and the Californian peninsula at this season."

According to Mr. TOWNSEND, "the Chinooks name it *a-ha-ke-lok.* It is a constant resident about the Columbia river; hops about in the bushes, and frequently hangs from the twigs in the manner of other Titmice, twittering all the while with a rapid enunciation resembling the words *thshish, tshist, tsee, twee.* The irides are bright yellow."

Chesnut-crowned Titmouse.

1. Male 2. Female and Nest.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen, Phulad.ª

PARUS MINIMUS, *Chestnut-crowned Titmouse*, Towns. Jour. Acad. Nat. Sc. Philadelphia, vol. vii. p. 190.

CHESTNUT-CROWNED TITMOUSE, *Parus minimus*, Aud. Orn. Biog., vol. iv. p. 382.

Adult Male.

Bill short, strong, compressed; upper mandible with its outline arched, the sides sloping and convex; the edges sharp, the tip descending, acute, and considerably exceeding that of the lower; which has the angle short, the dorsal line ascending and very slightly convex, the edges sharp, the tip acute. Nostrils round, basal. Head rather large, broadly ovate, convex in front; neck short; body slender. Feet of moderate length, tarsus proportionally longer than in any other American species, stout, compressed, with seven anterior scutella, and two lateral plates, forming a very sharp edge behind. Toes moderately stout, the first with its claw equal to the third, the anterior united as far as the first web. Claws rather large, arched, compressed, acute.

Plumage soft and blended. Wings short, very broad, concave, rounded; first quill half the length of the second, which is a quarter of an inch shorter than the outer secondaries. Tail very long, being half the entire length of the bird, slightly arched, much rounded, and a little emarginate.

Bill black; feet and claws dusky or blackish-brown. Upper part of the head and hind neck dull greyish-brown; upper parts brownish-grey; wings and tail dusky brown, tinged with grey, the margins of the quills and tail-feathers greyish-white. Cheeks of a paler tint than the head; all the lower parts brownish-white, the sides tinged with reddish.

Length to end of tail $4\frac{1}{2}$ inches; wing from flexure $1\frac{10\frac{1}{2}}{12}$; tail $2\frac{2}{12}$; bill along the ridge $\frac{4\frac{1}{2}}{12}$; tarsus $\frac{7}{12}$; hind toe $^{2\frac{3}{2}}$, its claw $\frac{2\frac{3}{2}}{12}$; middle toe $\frac{4}{12}$, its claw $\frac{2}{12}$.

Adult Female.

The female is rather smaller, and its colours are somewhat paler.

A nest presented to me by Mr. NUTTALL is of a cylindrical form, nine inches long and three and a half in diameter. It is suspended from the fork of a small twig, and is composed externally of hypna, lichens, and fibrous roots, interwoven so as to present a smoothish surface, and with a few stems of grasses, and some feathers of *Garrulus Stelleri* intermixed. The aperture, which is at the top, does not exceed seven-eighths of an inch in diameter; but for two-thirds of the length of the nest, the internal diameter is two inches. This part is lined with the cottony down of willows, carefully thrust into the interstices, and contains a vast quantity of soft feathers, chiefly of Steller's Jay, with some others, among which can be distinguished those of *Tetrao urophasianus*, *Columba fasciata*, and *Tanagra ludoviciana*. The eggs, nine in number, are pure white, $\frac{4\frac{1}{2}}{8}$ of an inch in length, by $\frac{3\frac{1}{2}}{8}$ broad, and are rather pointed at the small end.

FAMILY XI. SYLVIANÆ. WARBLERS.

Bill of moderate length, slender, straight, a little broader than high at the base, compressed toward the end; upper mandible with its dorsal line straight and declinate, convex at the end, the tip small, acute, the notches small; lower mandible with the angle of moderate length and narrow, the dorsal line straight, the sides convex, the tip narrow. Nostrils basal, oval or oblong. Head rather large, ovate; neck short; body rather slender. Feet of ordinary length, slender; tarsus compressed, with seven anterior scutella; toes moderate, compressed; first stouter, second and fourth nearly equal, third much longer, and adherent at the base; claws moderate, arched, slender, compressed, acute. Plumage soft and blended. Bristles short or weak. Wings of moderate length or long; the first quill very small, the second, third, and fourth longest. Tail long or of moderate length, of twelve feathers. Tongue, sagittate, slender, tapering to a slit and lacerated point. Œsophagus rather narrow, without crop; proventriculus oblong; stomach a gizzard of moderate strength, with the muscles distinct, the epithelium dense and rugous; intestine of moderate length; cœca very small. Trachæa simple, with four pairs of inferior laryngeal muscles.

Of this family, which in Europe is so numerous, there are in North America only two genera, *Regulus* and *Sialia*, the former composed of very small birds, allied in manners to the Tits, the latter approaching the Thrushes in form. The connecting links being wanting with us, these genera might seem at first sight very dissimilar.

Genus I.—REGULUS, *Cuv.* KINGLET.

Bill short, straight, very slender, a little broader than high at the base, compressed toward the end; upper mandible nearly straight in its dorsal outline, the edges slightly notched, the tip a little declinate, acute; lower mandible with its outline ascending, nearly straight, the tip acute. Nostrils basal, elliptical, concealed by the reversed feathers. Head large, broadly ovate; neck short; body short. Legs rather long; tarsus slender, longer than the middle toe, much compressed, scutella blended, excepting the lower four toes, rather small, much compressed, hind toe large; lateral equal; claws

Cuvier's Kinglet

Male.

Broad-leaved laurel Kalmia latifolia

Drawn from Nature by J.J.Audubon, F.R.S.F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen, Philad.ª

rather long, arched, much compressed, acute. Plumage very loose and full. Short bristles at the base of the bill. Feathers of the head elongated and silky in the adults. Wings of ordinary length, with the first quill very small, the fourth and fifth longest. Tail of ordinary length, emarginate.

CUVIER'S KINGLET.

REGULUS CUVIERII, *Aud.*

PLATE CXXXI.—MALE.

I named this pretty and rare species after Baron CUVIER, not merely by way of acknowledgment for the kind attentions which I received at the hands of that deservedly celebrated naturalist, but as a homage due by every student of nature to one unrivalled in the knowledge of General Zoology.

I shot the bird represented in the Plate, on my father-in-law's plantation of Fatland Ford, on the Schuylkill river in Pennsylvania, on the 8th of June, 1812, while on a visit to my honoured relative Mr. WILLIAM BAKEWELL. The drawing which I then made I kept for a long time without having described the bird from which it was taken. I killed this little bird, supposing it to be one of its relatives, the Ruby-crowned Kinglet, whilst it was searching for insects and larvæ amongst the leaves and blossoms of the *Kalmia latifolia*, on a branch of which you see it represented, and was not aware of its being a different bird until I picked it up from the ground. I have not seen another since, nor have I been able to learn that this species has been observed by any other individual. It might, however, be very easily mistaken for the Ruby-crowned Kinglet, the manners of which appear to be much the same.

The *Kalmia latifolia* grows in great profusion in the State of Pennsylvania, and along the range of the Alleghanies, in all rocky and hilly situations.

CUVIER'S CRESTED WREN, *Regulus Cuvierii*, Nutt. Man., vol. i. p. 416.
CUVIER'S REGULUS, *Regulus Cuvierii*, Aud. Orn. Biog., vol. i. p. 288.

Bill short, straight, subulate, very slender, compressed, with inflected

edges; upper mandible nearly straight in its dorsal outline, the edges slightly notched close upon the slightly declinate acute tip; lower mandible straight, acute. Nostrils basal, elliptical, half closed above by a membrane, covered over by the feathers. The whole form slender. Legs rather long; tarsus slender, much compressed, longer than the middle toe, covered anteriorly with a few indistinct scutella; toes scutellate, the lateral ones nearly equal and free; hind toe stouter; claws weak, compressed, arched, acute.

Plumage very loose and tufty. Bristles at the base of the bill; a small decomposed feather covering the nostril. Wings of ordinary length, the third and fourth primaries longest. Tail of twelve feathers, emarginate.

Bill black. Iris hazel. Feet yellowish-brown. The general colour of the upper parts is dull greyish-olive. Forehead, lore, and a line behind the eye, black. A semilunar band of the same on the top of the head, the middle space vermilion. Wings and tail dusky, edged with greenish-yellow. Secondary coverts tipped with greyish-white. Under parts greyish-white.

Length 4¼ inches, extent of wings 6; bill along the ridge nearly ⅓, along the gap nearly ½; tarsus ¾.

The Broad-leaved Kalmia, or Laurel.

Kalmia latifolia, *Willd.* Sp. Pl. vol. ii. p. 600. *Pursch*, Fl. Amer., vol. i. p. 296.—Decandria Monogynia, *Linn.*—Rhododendra, *Juss.*

This beautiful species is characterized by its scattered, petiolate, elliptical leaves, which are smooth, and nearly of the same colour on both sides; and its terminal, viscid, and pubescent corymbs. It is a middle-sized shrub, sometimes attaining a height of eight or ten feet. The leaves are evergreen, as in the other species, and the flowers of a delicate pink.

American Golden-crested Kinglet.

1. Male. 2. Female.

Thalia dealbata?

Drawn from Nature by J.J.Audubon FRSELS

Lith.d Printed & Col.d by J. T. Bowen, Philad.a

AMERICAN GOLDEN-CRESTED KINGLET.

REGULUS SATRAPA, *Lichtenstein.*

PLATE CXXXII.—MALE AND FEMALE.

This active little bird breeds in Labrador, where I saw it feeding its young in August, when the species appeared already moving southward; but although it was common there and in Newfoundland, as was the Ruby-crowned Kinglet, we did not succeed in our search for its nest. It enters the United States late in September, and continues its journey beyond their limits, as I have met with it on the borders of our most Southern Districts during winter. Individuals remain in all the Southern and Western States the whole of that season, and leave them again about the beginning of March.

They generally associate in groups, composed each of a whole family, and feed in company with the Titmice, Nuthatches, and Brown Creepers, perambulating the tops of trees and bushes, sometimes in the very depth of the forests or the most dismal swamps, while at other times they approach the plantations, and enter the gardens and yards. Their movements are always extremely lively and playful. They follow minute insects on the wing, seize them among the leaves of the pines, or search for the larvæ in the chinks of the branches. Like the Titmice they are seen hanging to the extremities of twigs and bunches of leaves, sometimes fluttering in the air in front of them, and are unceasingly occupied. They have no song at this season, but merely emit now and then a low *screep.*

On the 23d of January, while in company with my friend JOHN BACHMAN, I saw great numbers of them in the woods near Charleston, searching for food high in the trees as well as low down, and so careless of us, that although we would approach within a few feet of them, they were not in the least disconcerted. Their feeble chirp was constantly repeated. We killed a great number of them in hopes of finding among them some individuals of the species known under the name of *Regulus ignicapillus,* but in this we did not succeed. At times they uttered a strong querulous note, somewhat resembling that of the Black-headed Titmouse. The young had acquired their full plumage, but the females were more abundant than the males. At this season the yellow spot on their head is less conspicuous than towards spring, when they raise their crest feathers while courting.

The young shot in Newfoundland in August, had this part of the head of a uniform tint with the upper parts of the body. With us they are amazingly fat, but at Newfoundland we found them the reverse. I have represented a pair of them on a plant that grows in Georgia, and which I thought might prove agreeable to your eye.

GOLDEN-CRESTED WREN, *Sylvia Regulus*, Wils. Amer. Orn., vol. i. p. 126.
REGULUS CRISTATUS, Bonap. Syn., p. 91.
AMERICAN FIERY-CROWNED WREN, *Regulus tricolor*, Nutt. Man., vol. i. p. 420.
AMERICAN GOLDEN-CRESTED WREN, *Regulus tricolor*, Aud. Orn. Biog., vol. ii. p. 476.

Adult Male.

Bill short, straight, subulate, very slender, depressed at the base, compressed towards the end. Upper mandible with the dorsal outline nearly straight, the sides convex, the edges inflected towards the end, the tip slightly declinate, with an obscure notch on each side; lower mandible straight, acute. Nostrils basal, elliptical, half-closed above by a membrane, covered over by a single adpressed feather with disunited barbs. Head rather large, neck short, body small. Legs rather long; tarsus slender, much compressed, covered anteriorly with a long undivided plate above, and a few scutella beneath; toes slender, the lateral ones nearly equal and free, the hind toe proportionally large; claws arched, compressed, acute.

Plumage very loose and tufty. Bristles at the base of the bill. Wings of ordinary length; the first primary extremely short and narrow, the third, fourth, and fifth almost equal, but the fourth longest. Tail of ordinary length, slender, emarginate, of twelve narrow, acuminate feathers, the outer curved outwards towards the end.

Bill black. Iris brown. Feet brownish-yellow, the under part of the toes yellow. The general colour of the upper parts is ash-grey on the neck and sides of the head, tinged with olive on the back, and changing to yellowish-olive on the rump. There is a band of greyish-white across the lower part of the forehead, which at the eye separates into two bands, one extending over, the other under the eye; above this is a broadish band of black, also margining the head on either side, the inner webs and tips of these black feathers being of a bright pure yellow, of which colour are some of the feathers in the angle formed anteriorly by the dark band; the crown of the head in the included spaces covered with shorter flame-coloured silky feathers; an obscure line of dusky feathers from the angle of the mouth to beneath the eye, which is margined anteriorly and posteriorly with the same colour; the throat and lower parts are greyish-white, tinged anteriorly with yellowish-brown. Quills and coverts dusky, the quills margined with greenish-yellow, the secondary coverts broadly tipped with the same, as is

the first row of smaller coverts; the base of all the quills, excepting the four outer, white; from the seventh primary to the innermost secondary but two, a broad bar of blackish-brown. Tail of the same colour as the quills.

Length 4 inches, extent of wings 7; bill along the back $\frac{3}{12}$, along the edge $\frac{5\frac{1}{2}}{12}$; tarsus $\frac{8}{12}$.

Adult Female.

The female is somewhat smaller than the male, from which it differs in external appearance, chiefly in having pure yellow substituted for the flame-colour of the crown, and in having less grey on the hind neck.

If we compare the American Golden-crested Wren with the European, we find that they agree in general appearance, in the proportional length of the quills, and in the form of the tail, as well as that of the bill and legs. Their differences are the following.

Regulus tricolor is longer by half an inch than *R. cristatus*, its bill is stronger and $\frac{1}{12}$ of an inch shorter, its claws are also stronger and shorter, and the flame-coloured patch on the head is more extended and brighter. The European species has never so much grey on the neck and back, and its lower parts are always more tinged with brownish-yellow. The other differences are not very obvious, but the difference in the size of the bill, were there no other characters, would be enough, in a family of birds so closely resembling each other as the Reguli, to point out the American as distinct from the European species.

THALIA DEALBATA, *Pursch*, Fl. Amer. Sept., vol. ii. p. 584.—GYNANDRIA MONANDRIA, *Linn.*—ORCHIDEÆ, *Juss.*

This beautiful plant is a native of Georgia and South Carolina, where, according to PURSCH, it was discovered by J. MILLINGTON, Esq. of the latter State. It is perennial, flowers in August and September, attains a height of four feet, and grows in swampy places. The leaves are large, ovate, with parallel oblique ribs, and a revolute apex; the flowers are pale purple, in pairs, in a large panicle. I was indebted to Mr. NOISETTE for the specimen which I have represented.

RUBY-CROWNED KINGLET.

REGULUS CALENDULA, *Linn.*

PLATE CXXXIII.—MALE AND FEMALE.

The history of this diminutive bird is yet in a great measure unknown; and, although I have met with it in places where it undoubtedly breeds, I have not succeeded in finding its nest.

On the 27th of June, 1833, while some of my party and myself were rambling over the deserts of Labrador, the notes of a warbler came on my ear, and I listened with delight to the harmonious sounds that filled the air around, and which I judged to belong to a species not yet known to me. The next instant I observed a small bird perched on the top of a fir tree, and on approaching it, recognised it as the vocalist that had so suddenly charmed my ear and raised my expectations. We all followed its quick movements, as it flew from tree to tree backwards and forwards without quitting the spot, to which it seemed attached. At last, my son JOHN raised his gun, and, on firing, brought down the bird, which fell among the brushwood, where we in vain searched for it.

The next day we chanced to pass along the same patch of dwarf wood, in search of the nests of certain species of ducks, of which I intend to speak on another occasion. We were separated from the woods by a deep narrow creek; but the recollection of the loss of the bird, which I was sure had been killed, prompted me to desire my young friends to dash across and again search for it. In an instant six of us were on the opposite shore, and dispersed among the woods. My son was so fortunate as to find the little Regulus among the moss near the tree from which it had fallen, and brought it to me greatly disappointed. Not so was I; for I had never heard the full song of the Ruby-crowned Wren, and as I looked at it in my hand, I could not refrain from exclaiming—"And so this is the tiny body of the songster from which came the loud notes I heard yesterday!" When I tell you that its song is fully as sonorous as that of the Canary-bird, and much richer, I do not come up to the truth, for it is not only as powerful and clear, but much more varied and pleasing to the ear. We looked for its mate and its nest, but all around us was silent as death, or only filled with the hum of millions of insects. I made a drawing of it in its full spring plumage. A month later, the young of this species were seen feeding among the bushes.

Ruby-crowned Kinglet.

1. Male. 2. Female.

Kalmia angustifolia.

The Ruby-crowned Wren is found in Louisiana and other Southern States, from November until March. Near Charleston, in January, they are sometimes very abundant. The old birds are easily distinguished from the young, without shooting them, on account of the curious difference in their habits, for while the latter keep together among the lowest bushes, the former are generally seen on the top branches of high trees. I have not observed a similar difference in *Regulus tricolor*. The rich vermilion spot on the head in the present species was wanting in the young, that part being of the same plain colour as the back. I have found this bird in Kentucky also during winter, but generally in southern exposures, and usually in company with the Brown Creeper and the Titmouse.

The little bird of which I speak appears to feed entirely on small insects and their larvæ; and I have often thought it wonderful that there should seem to be no lack of food for it even during weather sometimes too cold for the birds themselves. It appears to migrate during the day only, and merely by passing from one bush to another, or hopping among the twigs, until a large piece of water happens to come in its way, when it rises obliquely to the height of above twenty yards, and then proceeds horizontally in short undulations. It emits a feeble chirp at almost every motion. So swiftly, however, does it perform its migration from Louisiana to Newfoundland and Labrador, that although it sometimes remains, in the first of these countries until late in March, it has young in the latter by the end of June; and the brood is able to accompany the old birds back to the south in the beginning of August.

The pair before you are placed on a plant which occurs in abundance from Maine to Labrador.

RUBY-CROWNED WREN, Wils. Amer. Orn., vol. i. p. 83.
REGULUS CALENDULA, Bonap. Syn., p. 91.
RUBY-CROWNED WREN, *Sylvia Calendula*, Nutt. Man., vol. i. p. 415.
RUBY-CROWNED REGULUS, *Regulus Calendula*, Aud. Orn. Biog., vol. ii. p. 546.

Adult Male, in summer plumage.

Bill short, straight, subulate, very slender, compressed, with inflected edges; upper mandible nearly straight in its dorsal outline, the edges scarcely notched close upon the slightly declinate acute tip; lower mandible straight, acute. Nostrils basal, elliptical, half-closed above by a membrane, covered over by the feathers. The whole form is slender, although the bird looks somewhat bulky, on account of the loose texture of the feathers. Legs rather long; tarsus slender, longer than the middle toe, much compressed, covered anteriorly with a few indistinct scutella; toes scutellate above, the

lateral ones nearly equal and free; hind toe stouter; claws weak, compressed, arched, acute.

Plumage very loose and tufty. Short bristles at the base of the bill. Feathers of the head elongated, silky. Wings of ordinary length, the third and fourth primaries longest. Tail of twelve feathers, emarginate, of ordinary length.

Bill black, yellow at the base of the lower, and on the edges of the upper mandible. Iris light brown. Feet yellowish-brown, the under parts yellow. The general colour of the upper parts is dull olivaceous, lighter behind. The eye is encircled with greyish-white, of which colour also are the tips of the wing-coverts. Quills and tail dusky, edged with greenish-yellow. The silky feathers of the crown of the head vermilion. The under parts greyish-white.

Length $4\frac{1}{4}$ inches, extent of wings 6; bill $\frac{1}{3}$; tarsus $\frac{3}{4}$.

Adult Female, in summer plumage.

The female resembles the male, but the tints are in general duller, especially the greenish-yellow of the wings.

The Narrow-leaved Kalmia, or Laurel.

Kalmia angustifolia, *Willd.*, Sp. Pl., vol. ii. p. 601. *Pursch*, Fl. Amer., vol. i. p. 296. —Decandria Monogynia, *Linn.*—Rhododendra, *Juss.*

This species is characterized by its petiolate, ternate, cuneato-oblong leaves, which are obtuse and tinged with red beneath. The corymbs of beautiful deep rose-coloured flowers are lateral; the peduncles and calyx downy, and the bracteæ smooth. It grows to the height of two or even sometimes four feet, and is common in the Northern States and British Provinces; flowers from the end of June to the middle of August.

Common Blue Bird.

1. Male 2. Female. 3. Young.

Great Mullein Verbascum Thapsus

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen. Philad.a

GENUS II.—SIALIA, *Swains.* BLUE-BIRD.

Bill of ordinary length, nearly straight, broader than high at the base, compressed toward the end; upper mandible with the dorsal line straight and slightly declinate, until near the end, when it becomes convex, the ridge narrow, the sides convex toward the end, the edges overlapping, with a distinct notch close to the narrow deflected tip; lower mandible with the angle of moderate length, and narrow, the dorsal line straight, the sides convex, the edges direct, the tip narrow. Nostrils basal, oval. Head rather large, ovate, neck short; body moderately full. Feet of ordinary length, rather slender; tarsus shorter than the middle toe and claw, its lower scutella only distinct; toes of moderate length, the first stouter, the lateral equal, the third much longer; the fourth adherent at the base; claws moderate, well curved, compressed, laterally grooved, acute. Plumage soft and blended; short bristles at the base of the upper mandible. Wings very long, pointed; the first quill very small, second, third, and fourth longest. Tail rather long, emarginate, of twelve rather strong feathers.

COMMON BLUE-BIRD.

SIALIA WILSONII, *Swains.*

PLATE CXXXIV.—MALE, FEMALE, AND YOUNG.

This lovely bird is found in all parts of our country, and is generally a permanent resident of the Southern States. It adds to the delight imparted by spring, and enlivens the dull days of winter. Full of innocent vivacity, warbling its ever pleasing notes, and familiar as any bird can be in its natural freedom, it is one of the most agreeable of our feathered favourites. The pure azure of its mantle, and the beautiful glow of its breast, render it conspicuous, as it flits through the orchards and gardens, crosses the fields or meadows, or hops along by the road-side. Recollecting the little box made

for it, as it sits on the roof of the house, the barn, or the fence-stake, it returns to it even during the winter, and its visits are always welcomed by those who know it best.

When March returns, the male commences his courtship, manifesting as much tenderness and affection towards his chosen one, as the dove itself. Martins and House Wrens! be prepared to encounter his anger, or keep at a respectful distance. Even the wily cat he will torment with querulous chirpings, whenever he sees her in the path from which he wishes to pick up an insect for his mate.

The Blue-bird breeds in the Floridas as early as January, and pairs at Charleston in that month, in Pennsylvania about the middle of April, and in the State of Maine in June. It forms its nest in the box made expressly for the purpose, or in any convenient hole or cavity it can find, often taking possession of those abandoned by the Woodpecker. The eggs are from four to six, of a pale blue colour. Two and often three broods are raised in the year. While the female sits on the second set of eggs, the male takes charge of the first brood, and so on to the end.

The food of this species consists of coleoptera, caterpillars, spiders, and insects of various kinds, in procuring which it frequently alights against the bark of trees. They are also fond of ripe fruits, such as figs, persimons, and grapes, and during the autumnal months they pounce on grasshoppers from the tops of the great mullein, so frequent in the old fields. They are extremely fond of newly ploughed land, on which, especially during winter and early spring, they are often seen in search of the insects turned out of their burrows by the plough.

The song of the Blue-bird is a soft agreeable warble, often repeated during the love-season, when it seldom sings without a gentle quivering of the wings. When the period of migration arrives, its voice consists merely of a tender and plaintive note, perhaps denoting the reluctance with which it contemplates the approach of winter. In November most of the individuals that have resided during the summer in the Northern and Middle Districts, are seen high in the air moving southward along with their families, or alighting to seek for food and enjoy repose. But many are seen in winter, whenever a few days of fine weather occur, so fond are they of their old haunts, and so easily can birds possessing powers of flight like theirs, move from one place to another. Their return takes place early in February or March, when they appear in parties of eight or ten of both sexes. When they alight at this season, the joyous carols of the males are heard from the tops of the early-blooming sassafras and maple.

During winter, they are extremely abundant in all the Southern States, and more especially in the Floridas, where I found hundreds of them on all

the plantations that I visited. The species becomes rare in Maine, still more so in Nova Scotia, and in Newfoundland and Labrador none were seen by our exploring party.

My excellent and learned friend Dr. RICHARD HARLAN of Philadelphia, told me that one day, while in the neighbourhood of that city, sitting in the piazza of a friend's house, he observed that a pair of Blue-birds had taken possession of a hole cut out expressly for them in the end of the cornice above him. They had young, and were very solicitous for their safety, insomuch that it was no uncommon thing to see the male especially, fly at a person who happened to pass by. A hen with her brood in the yard came within a few yards of the piazza. The wrath of the Blue-bird rose to such a pitch that, notwithstanding its great disparity of strength, it flew at the hen with violence, and continued to assail her, until she was at length actually forced to retreat and seek refuge under a distant shrub, when the little fellow returned exultingly to his nest, and there carolled his victory with great animation.

This species has often reminded me of the Robin Redbreast of Europe, to which it bears a considerable resemblance in form and habits. Like the Blue-bird the Redbreast has large eyes, in which the power of its passions are at times seen to be expressed. Like it also, he alights on the lower branches of a tree, where, standing in the same position, he peeps sidewise at the objects beneath and around, until spying a grub or an insect, he launches lightly towards it, picks it up, and gazes around intent on discovering more, then takes a few hops with a downward inclination of the body, stops, erects himself, and should not another insect be near, returns to the branch, and tunes his throat anew. Perhaps it may have been on account of having observed something of this similarity of habits, that the first settlers in Massachusetts named our bird the Blue Robin, a name which it still retains in that state.

I have not received any intimation of the occurrence of this interesting bird to the west of the Rocky Mountains, although it was observed by Mr. TOWNSEND on the head waters of the Missouri. Dr. RICHARDSON mentions it as being found in summer to the eastward of the Rocky Mountains, up to the 48th parallel of latitude, beyond which none were seen by the members of the expedition. I found it abundant and breeding in the Texas. The eggs measure seven and a half eighths of an inch in length, five-eighths and three-fourths in breadth, and are rather more bulky than is usual in birds of this family. In the United States, when in an uncultivated district, it forms its nest in the hollow or hole of a tree.

BLUE-BIRD, *Sylvia Sialis*, Wils. Amer. Orn., vol. i. p. 56.

Saxicola Sialis, Bonap. Syn., p. 39.
Erythaca (Sialia) Wilsonii, Swains. and Rich. F. Bor. Amer., vol. ii. p. 210.
Blue-bird, *Ampelis Sialis*, Nutt. Man., vol. i. p. 444.
Blue-bird, *Sylvia Sialis*, Aud. Orn. Biog., vol. ii. p. 84; vol. v. p. 452.

Adult Male.

Bill of ordinary length, nearly straight, broader than deep at the base, compressed towards the end; upper mandible with the dorsal line convex, the tip declinate, the edges sharp. Nostrils basal, oval. Head rather large, neck short, body rather full. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, acute behind, scarcely longer than the middle toe; toes scutellate above, the two lateral ones nearly equal; claws arched, slender, compressed, that of the hind toe much larger.

Plumage soft and blended, slightly glossed. Wings of ordinary length, broad, the first quill longest, the second scarcely shorter, the secondary quills truncato-emarginate. Tail rather long, broad, nearly even, of twelve broad, rounded feathers. Short bristle-pointed feathers at the base of the mandible.

Bill and feet black, the soles yellow, iris yellowish-brown. The general colour of the upper parts is bright azure-blue, that of the lower yellowish-brown, the belly white. Shafts of the quills and tail-feathers dusky.

Length 7 inches, extent of wing 10; bill along the ridge $\frac{1}{2}$, along the edge $\frac{3}{4}$; tarsus $\frac{8}{12}$.

Adult Female.

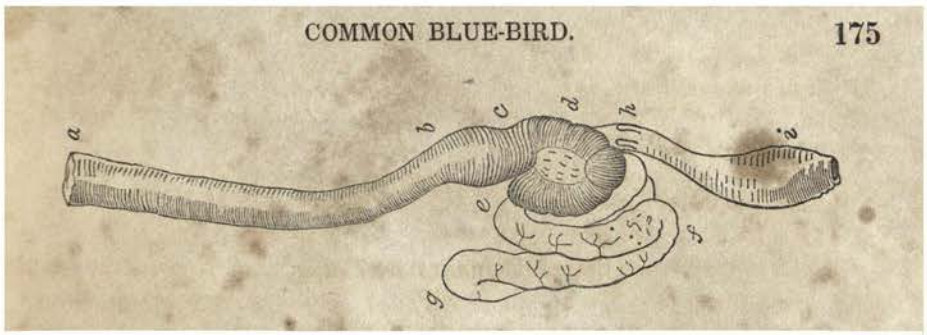
The female has the upper part of a tint approaching to leaden, the foreneck and sides yellowish-brown, but duller than in the male, the belly white.

Length $6\frac{1}{2}$ inches.

Young Bird.

When fully fledged, the young have the upper part of the head, the back of the neck, and a portion of the back broccoli-brown; the rest of the upper part much as in the female. The lower parts are light grey, the feathers of the breast and sides margined with brown.

In a male preserved in spirits, the roof of the mouth is flat, and similar to that of the Thrushes; the tongue triangular, deeply emarginate and papillate at the base, very thin, flat above, horny towards the end, tapering to a slit point, and having the edges lacerated. The œsophagus, *a b c*, is $2\frac{1}{2}$ inches long, its width at the upper part 4 twelfths; the proventriculus, *b c*, large. The stomach, *d e*, is of moderate size, broadly elliptical, a little compressed, 8 twelfths long, 7 twelfths broad; its muscles distinct, the lateral of considerable thickness, the lower very thin, the tendons elliptical; the epithelium tough, dense, with longitudinal rugæ. The intestine, *e f g h*



i, is rather short and wide, its length being 7¼ inches, its breadth in the duodenal portion 2¾ twelfths, contracting to 2 twelfths; the rectum of the same width at first, but enlarging into an oblong cloaca, *i*, 5 twelfths wide; the cœca, *h*, 2 twelfths long, ½ twelfth broad, cylindrical, 1 inch 1 twelfth distant from the extremity. Elongated salivary glands.

The trachea is 1 inch 10 twelfths long, moderately flattened, its rings 65, firm, with 2 additional half rings. There are four pairs of inferior laryngeal muscles; the bronchi of about 15 half rings.

The Great Mullein.

Verbascum Thapsus, *Willd.*, Sp. Pl., vol. i. p. 1001. *Pursch*, Flor. Amer., vol. i. p. 142. *Smith*, Engl. Flor., vol. i. p. 512.—Pentandria Monogynia, *Linn.*—Solaneæ, *Juss.*

This plant, which is well known in Europe, is equally so in America; but whether it has been accidentally or otherwise introduced into the latter country, I cannot say. At present there is hardly an old field or abandoned piece of ground on the borders of the roads that is not overgrown with it. In the Middle and Southern Districts, it frequently attains a height of five or six feet. The flowers are used in infusion for catarrhs, and a decoction of the leaves is employed in chronic rheumatism.

WESTERN BLUE-BIRD.

SIALIA OCCIDENTALIS, *Towns.*

PLATE CXXXV.—MALE AND FEMALE.

Of this handsome bird, which was discovered by Mr. TOWNSEND, Mr. NUTTALL has favoured me with the following notice:—"The Western Blue-bird possesses many of the habits of our common kind. The male is equally tuneful throughout the breeding season. Mounting some projecting branch of an oak or low pine, he delivers his delightful ditty with great energy, extending his wings, and exerting all his powers as it were to amuse his sitting mate, or to allure attention to his short, often-repeated, but thrilling lay. In the midst of all this charming employment economy is rarely forgotten, and a crawling beetle or busy insect is no sooner seen than snatched up by our still watchful songster, who resumes his wonted perch, to be again interrupted by the cares of providing a subsistence; or, reiterating his melody, strives to drown the song of some neighbouring rival by tender strains and more earnest endeavours. He appears also equally solicitous with our common species to shew his affection for his mate, whom he constantly accompanies, feeds, and caresses with an ardour of affection seldom rivalled. His song is more varied, sweet and tender than that of the common Sialia, and very different in many of its expressions. In the small rocky prairies of the Columbia, near its bank, where I first heard and saw this species, they were exceedingly shy, probably in consequence of the presence of birds of prey, which prowled around, and it was with difficulty that we got sight of them, but afterwards, in the vicinity of Santa Barbara, in Upper California, I saw them in considerable numbers, and very familiar, making at this time (April) their nests in the knot-holes of the oaks which abound in the neighbouring plains. We first met a flock of young birds alone, in the winter, near to Fort Vancouver, flitting through the tall fir trees, like so many timorous and silent winter passengers. These had so much the appearance of young of the common species, that for some time we paid little attention to them; but their silence, the absence of the usual complaints of *t shaye vit*, &c., and at length their different notes, convinced me of their being distinct, previous to any examination of their plumage. This species, unlike *Sialia arctica*, does not extend to the mountains, but

Western Blue Bird.

1. Male. 2. Female.

Drawn from Nature by J.J. Audubon, FRSFLS. Lith.ª Printed & Col.ª by J. T. Bowen, Philad.ª

seems constantly to affect similar situations with our common kind, along the coast of the Pacific, as ours does along that of the Atlantic."

I have given figures of both the male and the female in their spring dress.

SIALIA OCCIDENTALIS, *Western Blue-bird*, Towns., Journ. Acad. Nat. Sc. Philadelphia, vol. vii. p. 188.

WESTERN BLUE-BIRD, *Sylvia occidentalis*, Aud. Orn. Biog., vol. v. p. 41.

Adult Male in summer.

This species in size and form, as well as in colour, is very similar to the Common Blue-bird. Its bill is of ordinary length, nearly straight, broader than high at the base, compressed toward the end; upper mandible with the dorsal line straight and a little declinate at the base, convex toward the end, the ridge narrow, the sides convex toward the end, the edges direct and overlapping, with a slight notch close to the narrow deflected tip; lower mandible with the angle of moderate length and narrow, the dorsal line straight, the sides convex, the edges direct, the tip narrow. Nostrils basal, elliptical, operculate, partially concealed by the feathers.

Head rather large; neck short; body moderately full. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with seven scutella, behind with two long plates meeting so as to form a thin edge; toes of moderate length; the first stouter, the second and fourth nearly equal, the third much longer; claws moderate, well curved, compressed, laterally grooved, tapering to a fine point.

Plumage soft and blended, with considerable gloss. Short bristles at the base of the upper mandible. Wings very long; the first quill very small, being only seven-twelfths of an inch long, the second half a twelfth shorter than the third, which is longest, but only exceeds the fourth by three-fourths of a twelfth; the other primaries rapidly graduated; outer secondaries emarginate, inner not elongated. Tail rather long, deeply emarginate, the middle feathers being four-twelfths of an inch shorter than the longest.

Bill and feet black; iris brown. The general colour of the upper parts is bright blue, of a tint approaching to ultramarine; a broad band across the fore part of the back, and the scapulars, chestnut-red; the quills and larger coverts dark greyish-brown, the outer webs blue, the primaries light brown at the end, the secondaries faintly margined with whitish. The tail-feathers are also brown toward the end, but blue toward the base; the lateral with the margin of the outer web whitish. The sides and fore part of the neck are light blue, tinged with grey; the fore part of the breast and the sides of the body light chestnut-red; the rest of the lower parts greyish-white, tinged with blue.

Length to end of tail 7 inches; bill along the ridge $\frac{5}{12}$, along the edge of lower mandible $\frac{7}{12}$; wing from flexure $4\frac{5}{12}$; tail $2\frac{10}{12}$; tarsus $\frac{10}{12}$, hind toe $\frac{4}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{8}{12}$, its claw $\frac{3}{12}$.

Adult Female in summer.

The female differs from the male in the same degree as that of the Arctic Blue-bird from its male; the upper parts being light greyish-brown, tinged with blue, which is brighter on the rump; the wings and tail are as in the male, but with less blue; the lower parts are bluish-grey, the breast and sides light brownish-red, tinged with grey.

ARCTIC BLUE-BIRD.

SIALIA ARCTICA, *Swains.*

PLATE CXXXVI.—MALE AND FEMALE.

This beautiful species, first introduced to the notice of ornithologists by Dr. RICHARDSON, who procured a single specimen at Fort Franklin, in July 1825, is merely a summer visitor to the Fur Countries. Both the male and the female are represented in my plate. The latter I believe has not hitherto been figured. Mr. NUTTALL'S notice respecting this interesting bird, so closely allied to *Sialia Wilsoni*, is as follows:

"*Sialia arctica.* Ultramarine Blue-bird. About fifty or sixty miles north-west of the usual crossing place of that branch of the Platte called Larimie's Fork, in the early part of June, this species of Sialia is not uncommon. The female utters a low plaint when her nest is approached, the place for which is indifferently chosen in a hole in a clay cliff, or in that of the trunk of a decayed cedar. At this time the young were hatched. The nest is made of the usual material of dry grass in very insignificant quantity. They are more shy than the common species, and have the same mode of feeding by watching on some low bush or plant, and descending for an insect. We afterwards saw a nest of this species on a cliff of the Sandy river, a branch of the Colorado of the West. The female and male were both feeding their brood. The former chirped and appeared uneasy at my approach, and at intervals uttered a plaintive *yéow*. The male sings more

Arctic Blue Bird

Male 1 Female 2

Drawn from Nature by J.J. Audubon F.R.S.F.L.S

Lith. Printed & Col.d by J.T. Bowen, Phil.

quaintly and monotonously than the common kind, but in the same general tone and manner."

To this Mr. TOWNSEND adds that it is found in the "Forests on the banks of the Platte river, in the vicinity of the Black Hills, and in the same situations on the banks of the Columbia. This species," he continues, "was observed in the winter at Fort Vancouver, associating with *S. occidentalis*. They confine themselves chiefly to the fences in the neighbourhood of the Fort, occasionally flying to the ground, and scratching in the earth for minute insects, the fragments of which were found in their stomachs. After procuring an insect, the male usually returned to the fence, and warbled for a minute most delightfully. Its note, although like that of our common Sialia, is still so different as to be easily recognised. It is equally sweet and clear, but of so little power (at least at this season) as to be heard only at a short distance. In the spring it is louder and bolder, but is at all times much less strong than that of the common species."

ERYTHACA (SIALIA) ARCTICA, *Arctic Blue-bird*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 209.
ARCTIC BLUE-BIRD, *Sialia Arctica*, Nutt. Man., vol. ii. p. 573.
ARCTIC BLUE-BIRD, *Sylvia Arctica*, Aud. Orn. Biog., vol. v. p. 38.

Adult Male.

Bill of ordinary length, nearly straight, broader than high at the base, compressed towards the end; upper mandible with the dorsal line straight and declinate, until near the end, when it becomes convex, the ridge narrow, the sides convex towards the end, the edges direct and overlapping, with a distinct notch close to the narrow deflected tip; lower mandible with the angle of moderate length and narrow, the dorsal line straight, the sides convex, the edges direct, the tip narrow. Nostrils basal, oval.

Head rather large; neck short; body moderately full. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with seven long scutella, posteriorly with two very long plates meeting so as to form a sharp edge; toes of moderate length; the first stouter, the second and fourth nearly equal, the third much longer; claws moderate, well curved, slender, compressed, laterally grooved, tapering to a fine point.

Plumage soft and blended, with considerable gloss; short bristles at the base of the upper mandible. Wings very long; the first quill very small, being only seven-twelfths of an inch long, the second one-twelfth shorter than the third, which is longest, but exceeds the fourth only by half a twelfth, the other primaries rapidly graduated; the outer secondaries emarginate, the inner not elongated. Tail long, deeply emarginate, of twelve strong feathers, of which the medial are five-twelfths shorter than the lateral.

Bill and feet black; iris brown. The general colour of the upper parts is light azure blue, approaching to smalt blue; the quills and larger coverts dark greyish-brown, the outer tinged with blue, the primaries broadly margined with light blue, the secondaries with greyish-blue, the inner chiefly with dull white. The tail-feathers are also brown, gradually more blue toward the base, and all broadly margined externally with that colour. The sides of the head, the fore part and sides of the neck, and the anterior half of the breast, light greenish-blue; that colour gradually fading on the hind part of the breast; the abdomen and lower tail-coverts greyish-white.

Length to end of tail 7¼ inches; bill along the ridge $\frac{6}{12}$, along the edge of lower mandible $\frac{7\frac{3}{4}}{12}$; wing from flexure $4\frac{7\frac{1}{2}}{12}$; tail $2\frac{11}{12}$; tarsus $\frac{10\frac{1}{2}}{12}$, hind toe $\frac{4}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{7\frac{1}{2}}{12}$, its claw $\frac{2\frac{3}{4}}{12}$.

Adult Female.

The female differs greatly. The parts which retain the same colour are the rump, wings, and tail, of which, however, the blue edgings are less pure and of less extent, and the outer primary and outer tail-feathers are margined externally with white. The upper part of the head, the hind neck, the back, scapulars, and wing-coverts are light greyish-brown, margined with pale greenish-blue; the cheeks and sides of the neck are paler; the fore part of the neck and the anterior portion of the breast are light greyish-brown, on the breast tinged with red; the rest of the lower parts of an undecided brownish-white tint; the lower wing-coverts pale greyish-brown, edged with white, the lower tail-coverts with a medial dusky streak.

Length to end of tail 6¾ inches; bill along the ridge $\frac{6\frac{1}{2}}{12}$; wing from flexure $4\frac{2}{12}$; tail $2\frac{7}{12}$; tarsus $\frac{10}{12}$; hind toe $\frac{4}{12}$, its claw $\frac{4\frac{1}{2}}{12}$, middle toe $\frac{6\frac{3}{4}}{12}$, its claw $\frac{3\frac{1}{2}}{12}$.

The above descriptions are taken from skins procured by Mr. TOWNSEND on the Columbia river. That of the male is from a specimen shot in June 1835; and that of the female from one shot on the 26th of the same month and year. Of two other specimens in my possession, a male agrees with that described, but has the blue of the upper parts deeper, and of a tint approaching to that of the common species. The female is also similar to that described, but has a dull white spot before the eye, and the upper part of the throat brownish-white.

FAMILY XII. TURDINÆ. THRUSHES.

Bill short, or of moderate length, rather strong, straight, compressed toward the end; upper mandible with its dorsal outline a little convex and declinate, the tip small, rather acute, the notches small; lower mandible with the angle rather short, of moderate width, the dorsal line straight, the sides convex, the tip acute. Head oblong, compressed, of moderate size; neck rather short; body moderate. Eyes of moderate size. External aperture of ear large and roundish. Feet of moderate strength; tarsus compressed, with seven anterior scutella; toes rather strong, compressed; first, second, and fourth, nearly equal, third much longer, and adherent to the fourth at the base; claws rather long, arched, compressed, laterally grooved, acute. Plumage rather blended. Bristles small. Wings of moderate length, broad, rounded; the first quill very small, third and fourth longest. Tail of twelve feathers, varying in length. Tongue sagittate, and papillate at the base, slender, tapering, its tip slit. Œsophagus rather narrow, without crop; proventriculus oblong; stomach a gizzard of moderate strength, its lateral and lower muscles distinct; the epithelium dense and rugous; intestine of moderate length; cœca very small, cylindrical. Trachea simple, with four pairs of inferior laryngeal muscles.

Genus I.—CINCLUS, *Bechst.* DIPPER.

Bill rather short, slender, slightly ascending, much compressed toward the end; upper mandible with its dorsal line straight until toward the end, the ridge rounded, the sides convex, the edges somewhat inflected, with an obscure notch close to the narrow deflected tip; lower mandible slightly bent upwards, the angle medial and very narrow, the dorsal line ascending and slightly convex, the tip narrow and rather acute. Nostrils linear, direct, exposed. General form short, full, and compact. Head oblong, compressed. Legs strong; tarsus of moderate length, compressed, covered anteriorly with a long undivided plate and four inferior scutella; toes rather large and strong; claws arched, much compressed, laterally grooved, that of the hind toe considerably larger. Plumage ordinary, rather blended. Bristles obsolete. Wings rather short, convex, rounded. Tail short, even.

AMERICAN DIPPER.

CINCLUS AMERICANUS, *Swains.*

PLATE CXXXVII.—MALE AND FEMALE.

The specimens from which the figures here given have been taken, were procured on the Rocky Mountains, on the 15th of June, when they were supposed to be breeding, so that they were probably adults in full plumage. Having little taste for critical discussions, I shall refrain from inflicting on the reader a long and elaborate review of all that has been said on the subject of this interesting but little-known bird, which was figured by the Prince of MUSIGNANO from a specimen obtained near the sources of the Athabasca river, under the name of *Cinclus Pallasii;* and has been described by Mr. SWAINSON, first as *C. Mexicanus,* and again, in the Fauna Boreali-Americana, as *C. Americanus.* Unfortunately very little is known respecting the habits of the American Dipper, which, however, being in form and size so very similar to that of Europe, probably resembles it in its mode of life. I will therefore endeavour to supply the deficiency by presenting you with some extracts from the history of the latter, as given by my friend WILLIAM MACGILLIVRAY, of Edinburgh, who, among the wild hills of his native country, has studied its habits with a zeal and acuteness certainly not exceeded by those of any ornithologist.

"This bird having in a particular manner engaged my attention in the course of my many rambles, I have been enabled to trace its history in a satisfactory degree, so that the account here presented of it I consider as amongst the most accurate of those which I have written.

"It frequents the sides of rivers and streams of inferior magnitude, especially such as are clear and rapid, with pebbly or rocky margins. I have met with it in every part of Scotland, as well as in the hilly parts of Cumberland and Westmoreland, and it is said by MONTAGU to occur in Wales and Devonshire. In Scotland it is not peculiar to the mountainous regions, being found in the lowest parts of the Lothians, as well as on the alpine rills of the Grampians, and other elevated tracts, but it is generally more abundant in hilly ground, and, although never common in any district, is nowhere more plentiful than on the Tweed and its tributaries, in the pastoral counties of Peebles and Selkirk. It is also a well-known inhabitant of all the larger Hebrides. It is not only a permanent resident, but seldom

American Dipper

Male 1 Female 2

Drawn from Nature by J.J. Audubon, F.R.S.F.L.S.

Lith. Printed & Col.d by J.T. Bowen, Phil.

shifts its station to any great extent, excepting during continued frosts, when it descends along the streams, and is seen flitting about by the rapids and falls. Mill-dams are also favourite resorts, especially in winter and spring. On lakes having a muddy or peaty bottom I have never observed it; but it may sometimes be seen on those which are shallow and pebbly at the margins, as on St. Mary's Loch in Yarrow, where I have shot it.

"The flight of the Dipper is steady, direct, and rapid, like that of the Kingfisher, being effected by regularly timed and quick beats of the wings, without intermissions or sailings. It perches on stones or projecting crags by the sides of streams, or in the water, where it may be seen frequently inclining the breast downwards, and jerking up the tail, much in the manner of the Wheatear and Stonechat, and still more of the Wren; its legs bent, its neck retracted, and its wings slightly drooping. It plunges into the water, not dreading the force of the current, dives, and makes its way beneath the surface, generally moving against the stream, and often with surprising speed. It does not, however, immerse itself head foremost from on high like the Kingfisher, the Tern, or the Gannet; but either walks out into the water, or alights upon its surface, and then plunges like an Auk or a Guillemot, slightly opening its wings, and disappearing with an agility and dexterity that indicate its proficiency in diving. I have seen it moving under water in situations where I could observe it with certainty, and I readily perceived that its actions were precisely similar to those of the Divers, Mergansers, and Cormorants, which I have often watched from an eminence, as they pursued the shoals of sand-eels along the sandy shores of the Hebrides. It in fact flew, not merely using the wing, from the carpal joint, but extending it considerably and employing its whole extent, just as if advancing in the air. The general direction of the body in these circumstances is obliquely downwards; and great force is evidently used to counteract the effects of gravity, the bird finding it difficult to keep itself at the bottom, and when it relaxes its efforts coming to the surface like a cork. Montagu has well described the appearance which it presents under such circumstances:—"In one or two instances, where we have been able to perceive it under water, it appeared to tumble about in a very extraordinary manner, with its head downwards, as if picking something; and at the same time great exertion was used, both by the wings and legs." This tumbling, however, is observed only when it is engaged in a strong current, and its appearance is greatly magnified by the unequal refraction caused by the varying inequalities of the surface of the water. When searching for food, it does not proceed to great distances under water; but, alighting on some spot, sinks, and soon reappears in the immediate neighbourhood, when it either dives again, or rises on wing to drop somewhere else on the stream,

or settle on a stone. Often from a shelving crag or large stone it may be seen making short incursions into the water, running out with quiet activity, and presently bobbing up to the surface, and regaining its perch by swimming or wading. The assertion of its walking *in* the water, *on* the bottom, which some persons have ventured, is not made good by observation, nor countenanced by reason and the nature of things. The Dipper is by no means a walking bird: even on land I have never seen it move more than a few steps, which it accomplished by a kind of leaping motion. Its short legs and curved claws are very ill adapted for running, but admirably calculated for securing a steady footing on slippery stones, whether above or beneath the surface of the water. Like the Kingfisher, it often remains a long time perched on a stone, but in most other respects its habits are very dissimilar.

"On these occasions it is not difficult to approach it, provided due precaution be used; but in general it is shy and easily alarmed. I have several times shot at an individual which observed me as I was quietly walking up to it; but it is not often that one remains until you come within shot. A method which I have often successfully practised was to mark the position of the bird at a distance, taking note of an object on the bank opposite to it, then make a circuit, and suddenly come upon the spot. When one has been pursued either up or down a stream for a quarter of a mile or so, it usually turns, to regain its ordinary station, when it may be shot as it dashes past.

"On being wounded the Dipper commonly plunges into the water, flies beneath its surface to the shore, and conceals itself among the stones or under the bank. In fact, on all such occasions, if enough of life remains, it is sure to hide itself, so that one requires to look sharply after it. In this respect it greatly resembles the Common Gallinule.

"The food of the Dipper is said by authors to consist of small fishes, roe, and water-insects. I have opened a great number of individuals, at all seasons of the year, but have never found any other substances in the stomach than *Lymneæ*, *Ancyli*, Coleoptera, and grains of gravel. As to the ova and fry of the salmon, there is no evidence whatever that the Dipper ever swallows them; and, therefore, the persecution to which this bird has been subjected in consequence of the mere suspicion, ought to cease until the fact be proved. That the mollusca above mentioned form a principal part of its food was never suspected, and therefore I was much pleased with making the discovery, which satisfactorily accounted to me for all the subaqueous excursions of the species."

The only original observations respecting the habits of the American Dipper that I have to present here are the following, with which I have

been favoured by Mr. Townsend:—"This bird inhabits the clear mountain streams in the vicinity of the Columbia river. When observed it was swimming among the rapids, occasionally flying for short distances over the surface of the water, and then diving into it, and reappearing after a long interval. Sometimes it will alight along the margin, and jerk its tail upwards like a Wren. I did not hear it utter any note. The stomach was found to contain fragments of fresh-water snails. I observed that this bird did not alight on the surface of the water, but dived immediately from the wing."

Cinclus Pallasii, Bonap. Amer. Orn., vol. ii. p. 173.
Cinclus Americanus, *American Dipper*, Swains. & Rich. F. Bor. Amer., vol. ii. p. 173.
Black Water-Ouzel or Dipper, Nutt. Man., vol. ii. p. 358.
American Dipper, *Cinclus Americanus*, Aud. Orn. Biog., vol. iv. p. 493; vol. v. p. 303.

Adult Male.

Bill rather short, slender, slightly ascending, much compressed toward the end; upper mandible with its dorsal line slightly arched, the ridge rounded, the sides convex, the edges sharp and inflected, with an obscure notch close to the narrow slightly deflected tip; lower mandible slightly bent upwards, the angle medial and very narrow, the dorsal line ascending and slightly convex, the tip narrow and rather acute, the gape-line straight. Nostrils linear, direct, in the lower and fore part of the nasal membrane, which is covered with very short feathers. Eyes rather small; eyelids densely feathered.

The general form is short, full, and compact; the head oblong, compressed, rather small; the neck rather short; the body rather deeper than broad. Legs strong, of ordinary length; tarsus compressed, covered anteriorly with a long undivided plate and four inferior scutella, posteriorly with two long plates meeting at a very acute angle. Toes rather large and strong; the first, second, and fourth, nearly equal in length, but the first much stronger, the third much longer; the third and fourth united as far as the second joint of the latter. Claws rather long, arched, much compressed, that of the hind toe considerably larger.

Plumage very soft and blended, the feathers oblong and rounded; those about the base of the bill very short and velvety. No bristles at the base of the bill. Wings rather short, broad, convex, and rounded; the first quill very short and narrow, being about a third of the length of the second, which is shorter than the fourth, the third longest, and with the next three slightly cut out on the outer web towards the end; secondary quills long, broad, and rounded. Tail short, even, of twelve rather broad feathers,

which are slightly decurved. Legs feathered to the joint, but the tarsus entirely bare.

Bill brownish-black; iris hazel; feet flesh-coloured, toes dusky towards the end; claws yellowish-grey. The general colour of the plumage is blackish-grey or deep bluish-grey; the head and neck chocolate-brown, that colour extending lower on the fore part of the neck than behind; the downy feathers of both eyelids white; the quills and tail-feathers dusky; the secondaries terminally margined with white.

Length to end of tail $7\frac{1}{2}$ inches; extent of wings $10\frac{1}{2}$; wing from flexure $3\frac{3}{4}$; tail $2\frac{1}{4}$; bill along the ridge $\frac{9}{12}$, along the edge of lower mandible $\frac{11}{12}$; tarsus $1\frac{1}{12}$; hind toe $\frac{5}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{10}{12}$, its claw $\frac{4}{12}$.

Adult Female.

The female is in all respects similar to the male.

In form, size, and proportion, the American Dipper is almost precisely similar to the European.

Genus II.—ORPHEUS, *Swains.* MOCKING-BIRD.

Bill of moderate length or longish, rather slender, straight or slightly arched, broader than high at the base, compressed toward the end, acute; upper mandible with the ridge rather narrow, the sides convex toward the end, the notches very slight, the tip narrow; lower mandible with the angle of moderate length, the dorsal line straight or slightly decurved toward the end, the sides nearly erect, the tip narrow. Nostrils oblong, partially concealed by the feathers. Head of ordinary size, ovato-oblong; neck of moderate length; body rather slender. Feet of ordinary length, slender; tarsus scarcely so long as the middle toe and claw; hind toe of moderate length, stout, lateral toes equal; claws moderate, arched, compressed, acute. Plumage soft and blended. Bristles rather long. Wings of ordinary length, broad, rounded, the first quill very small, the fourth and fifth longest. Tail very long, straight, much rounded, or graduated.

Common Mocking Bird.

1. Males 1 & 2. Female 3.

Florida Jessamine, Gelsemenum nitidum.

Rattlesnake.

Drawn from Nature by J.J.Audubon.F.R.S.F.L.S. Lith.d Printed & Col.d by J. T. Bowen. Phila.a

COMMON MOCKING-BIRD.

ORPHEUS POLYGLOTTUS, *Linn.*

PLATE CXXXVIII.—MALE AND FEMALE.

It is where the great magnolia shoots up its majestic trunk, crowned with evergreen leaves, and decorated with a thousand beautiful flowers, that perfume the air around; where the forests and fields are adorned with blossoms of every hue; where the golden orange ornaments the gardens and groves; where bignonias of various kinds interlace their climbing stems around the white-flowered stuartia, and mounting still higher, cover the summits of the lofty trees around, accompanied with innumerable vines, that here and there festoon the dense foliage of the magnificent woods, lending to the vernal breeze a slight portion of the perfume of their clustered flowers; where a genial warmth seldom forsakes the atmosphere; where berries and fruits of all descriptions are met with at every step;—in a word, kind reader, it is where Nature seems to have paused, as she passed over the earth, and opening her stores, to have strewed with unsparing hand the diversified seeds from which have sprung all the beautiful and splendid forms which I should in vain attempt to describe, that the Mocking-bird should have fixed its abode, there only that its wondrous song should be heard.

But where is that favoured land?—It is in this great continent.—It is, reader, in Louisiana that these bounties of nature are in the greatest perfection. It is there that you should listen to the love-song of the Mocking-bird, as I at this moment do. See how he flies round his mate, with motions as light as those of the butterfly! His tail is widely expanded, he mounts in the air to a small distance, describes a circle, and, again alighting, approaches his beloved one, his eyes gleaming with delight, for she has already promised to be his and his only. His beautiful wings are gently raised, he bows to his love, and again bouncing upwards, opens his bill, and pours forth his melody, full of exultation at the conquest which he has made.

They are not the soft sounds of the flute or of the hautboy that I hear, but the sweeter notes of Nature's own music. The mellowness of the song, the varied modulations and gradations, the extent of its compass, the great brilliancy of execution, are unrivalled. There is probably no bird in the

world that possesses all the musical qualifications of this king of song, who has derived all from Nature's self. Yes, reader, all!

No sooner has he again alighted, and the conjugal contract has been sealed, than, as if his breast was about to be rent with delight, he again pours forth his notes with more softness and richness than before. He now soars higher, glancing around with a vigilant eye, to assure himself that none has witnessed his bliss. When these love-scenes, visible only to the ardent lover of nature, are over, he dances through the air, full of animation and delight, and, as if to convince his lovely mate that to enrich her hopes he has much more love in store, he that moment begins anew, and imitates all the notes which nature has imparted to the other songsters of the grove.

For awhile, each long day and pleasant night are thus spent; but at a peculiar note of the female he ceases his song, and attends to her wishes. A nest is to be prepared, and the choice of a place in which to lay it is to become a matter of mutual consideration. The orange, the fig, the pear-tree of the gardens are inspected; the thick briar patches are also visited. They appear all so well suited for the purpose in view, and so well does the bird know that man is not his most dangerous enemy, that instead of retiring from him, they at length fix their abode in his vicinity, perhaps in the nearest tree to his window. Dried twigs, leaves, grasses, cotton, flax, and other substances, are picked up, carried to a forked branch, and there arranged. Five eggs are deposited in due time, when the male having little more to do than to sing his mate to repose, attunes his pipe anew. Every now and then he spies an insect on the ground, the taste of which he is sure will please his beloved one. He drops upon it, takes it in his bill, beats it against the earth, and flies to the nest to feed and receive the warm thanks of his devoted female.

When a fortnight has elapsed, the young brood demand all their care and attention. No cat, no vile snake, no dreaded Hawk, is likely to visit their habitation. Indeed the inmates of the next house have by this time become quite attached to the lovely pair of Mocking-birds, and take pleasure in contributing to their safety. The dew-berries from the fields, and many kinds of fruit from the gardens, mixed with insects, supply the young as well as the parents with food. The brood is soon seen emerging from the nest, and in another fortnight, being now able to fly with vigour, and to provide for themselves, they leave the parent birds, as many other species do.

The above account does not contain all that I wish you to know of the habits of this remarkable songster; so, I shall shift the scene to the woods and wilds, where we shall examine it more particularly.

The Mocking-bird remains in Louisiana the whole year. I have observed with astonishment, that towards the end of October, when those which had

gone to the Eastern States, some as far as Boston, have returned, they are instantly known by the "southrons," who attack them on all occasions. I have ascertained this by observing the greater shyness exhibited by the strangers for weeks after their arrival. This shyness, however, is shortly over, as well as the animosity displayed by the resident birds, and during the winter there exists a great appearance of sociality among the united tribes.

In the beginning of April, sometimes a fortnight earlier, the Mocking-birds pair, and construct their nests. In some instances they are so careless as to place the nest between the rails of a fence directly by the road. I have frequently found it in such places, or in the fields, as well as in briars, but always so easily discoverable that any person desirous of procuring one, might do so in a very short time. It is coarsely constructed on the outside, being there composed of dried sticks of briars, withered leaves of trees, and grasses, mixed with wool. Internally it is finished with fibrous roots disposed in a circular form, but carelessly arranged. The female lays from four to six eggs the first time; four or five the next, and when there is a third brood, which is sometimes the case, seldom more than three, of which I have rarely found more than two hatched. The eggs are of a short oval form, light green, blotched and spotted with umber. The young of the last brood not being able to support themselves until late in the season, when many of the berries and insects have become scarce, are stunted in growth;—a circumstance which has induced some persons to imagine the existence in the United States of two species of Common Mocking-bird, a larger and a smaller. This, however, in as far as my observation goes, is not correct. The first brood is frequently brought to the bird-market in New Orleans as early as the middle of April. A little farther up the country, they are out by the fifteenth of May. The second brood is hatched in July, and the third in the latter part of September.

The nearer you approach to the sea-shores, the more plentiful do you find these birds. They are naturally fond of loose sands, and of districts scantily furnished with small trees, or patches of briars, and low bushes.

During incubation, the female pays such precise attention to the position in which she leaves her eggs, when she goes to a short distance for exercise and refreshment, to pick up gravel, or roll herself in the dust, that, on her return, should she find that any of them has been displaced, or touched by the hand of man, she utters a low mournful note, at the sound of which the male immediately joins her, and they are both seen to condole together. Some people imagine that, on such occasions, the female abandons the nest; but this idea is incorrect. On the contrary, she redoubles her assiduity and care, and scarcely leaves the nest for a moment; nor is it until she has been

repeatedly forced from the dear spot, and has been much alarmed by frequent intrusions, that she finally and reluctantly leaves it. Nay, if the eggs are on the eve of being hatched, she will almost suffer a person to lay hold of her.

Different species of snakes ascend to their nests, and generally suck the eggs or swallow the young; but on all such occasions, not only the pair to which the nest belongs, but many other Mocking-birds from the vicinity, fly to the spot, attack the reptiles, and, in some cases, are so fortunate as either to force them to retreat, or deprive them of life. Cats that have abandoned the houses to prowl about the fields, in a half wild state, are also dangerous enemies, as they frequently approach the nest unnoticed, and at a pounce secure the mother, or at least destroy the eggs or young, and overturn the nest. Children seldom destroy the nests of these birds, and the planters generally protect them. So much does this feeling prevail throughout Louisiana, that they will not willingly permit a Mocking-bird to be shot at any time.

In winter, nearly all the Mocking-birds approach the farm-houses and plantations, living about the gardens or outhouses. They are then frequently seen on the roofs, and perched on the chimney-tops; yet they always appear full of animation. Whilst searching for food on the ground, their motions are light and elegant, and they frequently open their wings as butterflies do when basking in the sun, moving a step or two, and again throwing out their wings. When the weather is mild, the old males are heard singing with as much spirit as during the spring or summer, while the younger birds are busily engaged in practising, preparatory to the love season. They seldom resort to the interior of the forest either during the day or by night, but usually roost among the foliage of evergreens, in the immediate vicinity of houses in Louisiana, although in the Eastern States they prefer low fir trees.

The flight of the Mocking-bird is performed by short jerks of the body and wings, at every one of which a strong twitching motion of the tail is perceived. This motion is still more apparent while the bird is walking, when it opens its tail like a fan and instantly closes it again. The common *cry* or *call* of this bird is a very mournful note, resembling that uttered on similar occasions by its first cousin the *Orpheus rufus*, or, as it is commonly called, the "*French Mocking-bird.*" When travelling, this flight is only a little prolonged, as the bird goes from tree to tree, or at most across a field, scarcely, if ever, rising higher than the top of the forest. During this migration, it generally resorts to the highest parts of the woods near water-courses, utters its usual mournful note, and roosts in these places. It travels mostly by day.

Few Hawks attack the Mocking-birds, as on their approach, however sudden it may be, they are always ready not only to defend themselves

vigorously and with undaunted courage, but to meet the aggressor half way, and force him to abandon his intention. The only Hawk that occasionally surprises it is the *Astur Cooperii*, which flies low with great swiftness, and carries the bird off without any apparent stoppage. Should it happen that the ruffian misses his prey, the Mocking-bird in turn becomes the assailant, and pursues the Hawk with great courage, calling in the mean time all the birds of its species to its assistance; and although it cannot overtake the marauder, the alarm created by their cries, which are propagated in succession among all the birds in the vicinity, like the watchwords of sentinels on duty, prevents him from succeeding in his attempts.

The musical powers of this bird have often been taken notice of by European naturalists, and persons who find pleasure in listening to the song of different birds whilst in confinement or at large. Some of these persons have described the notes of the Nightingale as occasionally fully equal to those of our bird, but to compare her essays to the finished talent of the Mocking-bird, is, in my opinion, quite absurd.

The Mocking-bird is easily reared by hand from the nest, from which it ought to be removed when eight or ten days old. It becomes so very familiar and affectionate, that it will often follow its owner about the house. I have known one raised from the nest kept by a gentleman at Natchez, that frequently flew out of the house, poured forth its melodies, and returned at sight of its keeper. But notwithstanding all the care and management bestowed upon the improvement of the vocal powers of this bird in confinement, I never heard one in that state produce any thing at all approaching in melody to its own natural song.

The male bird is easily distinguished in the nest, as soon as the brood is a little fledged, it being larger than the female, and shewing more pure white. It does not shrink so deep in the nest as the female does, at the sight of the hand which is about to lift it. Good singing birds of this species often bring a high price. They are long-lived and very agreeable companions. Their imitative powers are amazing, and they mimic with ease all their brethren of the forests or of the waters, as well as many quadrupeds. I have heard it asserted that they possess the power of imitating the human voice, but have never met with an instance of the display of this alleged faculty.

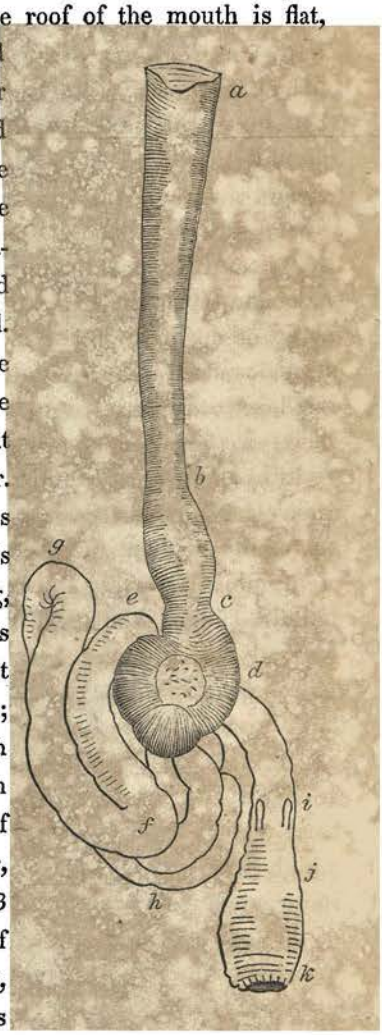
Mocking-bird, *Turdus polyglottus*, Wils. Amer. Orn., vol. ii. p. 14.
Turdus polyglottus, Bonap. Syn., p. 74.
Mocking-bird, *Turdus polyglottus*, Nutt. Man., vol. i. p. 320.
Mocking-bird, *Turdus polyglottus*, Aud. Orn. Biog., vol. i. p. 108; vol. v. p. 438.

Male.

Upper parts greyish-brown; feathers of the wings and tail greyish-black;

tips of secondary coverts, edges of primary quills, and a large spot at the end of the three lateral tail-feathers, white; lower parts whitish, marked with triangular dusky spots, of which there is a distinct line from the base of the bill; throat, middle of the breast, abdomen, and lower tail-coverts unspotted.

In an adult male of this celebrated bird, the roof of the mouth is flat, with two narrow longitudinal palatal ridges, and an anterior median prominent line; the posterior aperture of the nares is oblongo-linear, margined with acute papillæ, with which also the whole membrane of the palate is covered. The tongue is slender, 7 twelfths long, emarginate and papillate at the base, channelled above, horny and thin toward the end, which is slit and lacerated. The width of the mouth is 6 twelfths. The œsophagus, *a b c*, is 3 inches long, and of the nearly uniform width of 4½ twelfths, unless at the commencement where it is a little wider. The proventricular glands form a belt 5 twelfths of an inch in breadth. The stomach, *c d e*, is rather small, broadly elliptical, 9 twelfths long, 7½ twelfths broad, considerably compressed; its muscular coat moderately developed, the right muscle being 1½ twelfths thick, the left 1 twelfth; the epithelium dense, tough, reddish-brown, with seven longitudinal rugæ on one side and three on the other. The intestine, *e f g h i j k*, is of moderate length and width; the duodenum, *e f g*, curves at the distance of 1¼ inches, and is 3 twelfths wide, as is the rest of the intestine, of which the entire length is 9½ inches; the cloaca, *k*, very little enlarged; the cœca, *i*, 2 twelfths long, and ½ twelfth broad, their distance from the extremity 8 twelfths.



The right lobe of the liver is very large, being 1 inch 1½ twelfths in length, and extending under the anterior part of the stomach, in the form of a thin-edged rounded lobe; the left lobe is 10 twelfths long, and lies under the proventriculus and left side of the stomach. The heart is of moderate size, 7½ twelfths long, 5 twelfths in breadth, of a conical obtuse form.

The aperture of the glottis is 1½ twelfths long, and furnished with the

same muscles as the other singing birds, viz. the *thyro-arytenoideus*, which passes from the edge of the thyroid cartilage at its lower part to be inserted into the tip and sides of the arytenoid cartilage; the *thyro-cricoideus*, which passes from the anterior edge of the thyroid backward to the cricoid; a small muscle, the *crico-arytenoideus*, which assists in closing the glottis; and several small slips similar to those observed in other Thrushes, and especially in the Crows, in which the parts, being larger, are more easily seen. The trachea is 1 inch 10 twelfths in length, considerably flattened, gradually tapering from $1\frac{1}{2}$ twelfths to 1 twelfth; the rings, which are firm, are about 60, and 2 dimidiate rings. The lateral muscles are slender, as are the sterno-tracheal. There are four pairs of inferior laryngeal muscles; an anterior, going to the tip of the first half-ring, another to the tip of the second, a third broader and inserted into a portion of the last half-ring, the fourth or posterior or upper, long, narrow, and inserted into the point of the same half-ring. Besides these, as in all the land-birds, there is a pair of very slender muscles, the *cleido-tracheal*, arising from the sides of the thyroid cartilage and inserted into the furcula. The bronchi are rather wide and short, of 12 cartilaginous half rings.

As in all the birds of this family, there is a very slender salivary gland on each side, lying between the branch of the lower jaw and the mucous membrane of the mouth, upon which latter it opens anteriorly to the frenum of the tongue.

This species is abundant in the Texas, where it breeds. The eggs are generally one inch in length, and nine-twelfths and a quarter in breadth.

The Florida Jessamine.

Gelseminum nitidum, *Mich.* Flor. Amer., vol. i. p. 120. *Pursch*, Flor. Amer., vol. i. p. 184.—Pentandria Digynia, *Linn.* Apocineæ, *Juss.*

A climbing shrub, with smooth lanceolate leaves, axillary clusters of yellow flowers, which are funnel-shaped, with the limb spreading and nearly equal, the calyx five-toothed, the capsule two-celled and two-valved. It grows along the sea-coast, especially near rivers, from Virginia to Florida, flowering through the summer. The flowers are fragrant. It is also named *Carolina jessamine* and *yellow jessamine.*

MOUNTAIN MOCKING-BIRD.

ORPHEUS MONTANUS, *Towns.*

PLATE CXXXIX.—MALE.

This interesting and hitherto unfigured species was procured on the Rocky Mountains by Mr. TOWNSEND, who forwarded a single specimen to Philadelphia, where I made a drawing of it. The following notice by Mr. NUTTALL shews that it is nearly allied in its habits to the Mocking-bird:—

"On the arid plains of the central table-land, betwixt the northern sources of the Platte and the Colorado of the West, in the month of June, we frequently heard the cheering song of this delightful species, whose notes considerably resemble those of the Brown Thrush, with some of the imitative powers of the Mocking-bird. For a great part of the day, and especially early and late, its song resounds through the desert plains, as it warbles to its mate from some tall weed or bush of wormwood, and continues with little interruption nearly for an hour at a time. We met with it in the plains exclusively, till our arrival at Wallah Wallah, but we are not certain of having seen it in any part of California, it being apparently entirely confined to the cooler and open regions of the Rocky Mountains. Just before arriving at Sandy Creek of the Colorado, while resting for refreshment at noon, I had the good fortune to find the nest in a wormwood bush, on the margin of a ravine, from whence the male was singing with its usual energy. It contained four almost emerald green eggs, spotted with dark olive of two shades, more numerous towards the greater end, the spots large and roundish. The nest itself was made of small twigs and rough stalks, lined with stripes of bark and bison wool. The female flew off to a little distance, and looked on her unwelcome and unexpected visiter, without uttering either call or complaint."

ORPHEUS MONTANUS, *Mountain Mocking-bird*, TOWNS., Journ. Acad. Nat. Sc. Philadelphia, vol. vii. p. 192.

MOUNTAIN MOCKING-BIRD, *Turdus montanus*, Aud. Orn. Biog., vol. iv. p. 487.

Bill of moderate length, rather slender, compressed, straightish, pointed; upper mandible with the dorsal line slightly declinato-arcuate, the sides convex toward the end, the edges sharp, with a slight sinus close to the narrow declinate tip; lower mandible with the angle short and narrow, the

Mountain Mocking Bird

Male

Drawn from Nature by J. J. Audubon, F.R.S. F.L.S.

Lith. Printed & Col.d by J.T. Bowen. Phil.

Cat Bird.

1. Male 2. Female.

Plant. Black-berry. Rubus villosus.

Drawn from Nature by J.J.Audubon,F.R.S.F.L.S. Lith.ª Printed & Col.ª by J. T. Bowen. Philad.ª

dorsal line straight, the edges sharp and a little declinate at the end, the tip narrow; the gape-line very slightly arched.

Head oblong, of ordinary size; neck rather short, but somewhat slender. Feet longish, rather strong; tarsus compressed, anteriorly covered with seven large scutella, sharp-edged behind; toes of moderate length, slender, the hind toe stout, the lateral nearly equal, the anterior united for a short space at the base. Claws slender, arched, compressed, acute.

Plumage soft and blended. Wings of moderate length, rounded, the first quill short, the third and fourth longest, the second and fifth equal, and about a quarter of an inch shorter than the fourth. Tail long, rounded, of twelve rather narrow rounded feathers.

Bill dark brown, the base of the lower mandible paler. Feet yellowish-brown, claws dusky. The general colour of the upper parts is greyish-brown, the tips of the secondary coverts, the edges of the primary quills, and a large spot at the end of the three lateral tail-feathers, white; the lower parts whitish, marked with triangular dusky spots, of which there is a distinct line from the base of the bill; the throat, the middle of the breast, the abdomen, and lower tail-coverts unspotted.

Length to end of tail 8 inches, to end of wings $5\frac{3}{4}$; wing from flexure $3\frac{9}{12}$; tail $3\frac{1}{2}$; bill along the ridge $\frac{7}{12}$; tarsus $1\frac{2}{12}$; hind toe $\frac{4}{12}$, its claw $\frac{4}{12}$; middle toe $\frac{8}{12}$, its claw $\frac{3}{12}$.

CAT-BIRD.

ORPHEUS CAROLINENSIS, *Linn.*

PLATE CXL.—MALE AND FEMALE.

Some individuals of this species spend the winter in the southern portions of East Florida, where I have found them during the months of December and January; but the greater number retire beyond the limits of the United States about the middle of October. They are very rarely seen in the State of Louisiana, nor have I known any to breed in that portion of the country. They pass in abundance through Georgia and the Carolinas early in September, feeding then on the berries of the sweet gum, those of the poke and sumach, the seeds of grasses, &c. On their return in spring, they reach the

neighbourhood of Charleston about the 20th of March, when they feed on insects found along the lanes and garden-walks; but none are heard to sing, or are found to breed there. They are abundant during summer in the whole of the western country, and are plentifully dispersed from Virginia to the middle portions of Massachusetts, beyond which, proceeding eastward, I saw none. They are in fact unknown in the State of Maine, as well as in the British provinces.

Their migration is performed mostly during night, when they move slowly from bush to bush, scarcely ever extending their flight beyond the breadth of the rivers which they meet with. In a place where not an individual is to be seen in an afternoon, in the months of April or May, a considerable number may be found the following morning. They seem to give a preference to the Middle States during the summer season. Pennsylvania is particularly favoured by them; and it would be difficult to walk through an orchard or garden, along a field, or the borders of a wood, without being saluted by their plaintive notes. They breed in these places with much carelessness, placing their nests in any bush, tree, or briar that seems adapted for the purpose, and seeming to think it unnecessary to conceal them from man, who indeed ought to protect such amiable birds, but who sometimes destroys them in revenge for the trifling depredations which they commit on the fruits of the garden.

No sooner has the Cat-bird made its appearance in the country of its choice, than its song is heard from the topmost branches of the trees around, in the dawn of the morning. This song is a compound of many of the gentler trills and sweeter modulations of our various woodland choristers, delivered with apparent caution, and with all the attention and softness necessary to enable the performer to please the ear of his mate. Each cadence passes on without faltering; and if you are acquainted with the song of the birds he so sweetly imitates, you are sure to recognise the manner of the different species. When the warmth of his loving bosom engages him to make choice of the notes of our best songsters, he brings forth sounds as mellow and as powerful as those of the Thrasher and Mocking-bird. These medleys, when heard in the calm and balmy hours of retiring day, always seem to possess a double power, and he must have a dull ear indeed, and little relish for the simple melodies of nature, who can listen to them without delight.

The manners of this species are lively, and at intervals border on the grotesque. It is extremely sensitive, and will follow an intruder to a considerable distance, wailing and mewing as it passes from one tree to another, its tail now jerked and thrown from side to side, its wings drooping, and its breast deeply inclined. On such occasions, it would fain peck at your hand;

but these exhibitions of irritated feeling seldom take place after the young are sufficiently grown to be able to take care of themselves. In some instances, I have known this bird to recognise at once its friend from its foe, and to suffer the former even to handle the treasure deposited in its nest, with all the marked assurance of the knowledge it possessed of its safety; when, on the contrary, the latter had to bear all its anger. The sight of a dog seldom irritates it, while a single glance at the wily cat excites the most painful paroxysms of alarm. It never neglects to attack a snake with fury, although it oftens happens that it becomes the sufferer for its temerity.

The vulgar name which this species bears, has probably rendered it more conspicuous than it would otherwise be, and has also served to bring it into some degree of contempt with persons not the best judges of the benefits it confers on the husbandman in early spring, when, with industrious care, it cleanses his fruit-trees of thousands of larvæ and insects, which, in a single day, would destroy, while yet in the bud, far more of his fruit than the Cat-bird would eat in a whole season. But alas, selfishness, the usual attendant of ignorance, not only heaps maledictions on the harmless bird, but dooms it to destruction. The boys pelt the poor Thrush with stones, and destroy its nest whenever an opportunity presents; the farmer shoots it to save a pear; and the gardener to save a raspberry; some hate it, not knowing why: in a word, excepting the poor, persecuted crow, I know no bird more generally despised and tormented than this charming songster.

The attachment which the Cat-bird shews towards its eggs or young is affecting. It even possesses a humanity, or rather a generosity and gentleness, worthy of beings more elevated in the scale of nature. It has been known to nurse, feed, and raise the young of other species, for which no room could be afforded in their nests. It will sit on its eggs after the nest has been displaced, or even after it has been carried from one bush to another.

Like all our other Thrushes, this species is very fond of bathing and rolling itself in the dust or sand of the roads or fields. Several are frequently seen together on the borders of small ponds or clear rivulets, immersed up to their body, splashing the water about them until completely wetted; then, ascending to the tops of the nearest bushes, they plume themselves with apparent care, notwithstanding which they are at times so infested with a minute species of louse as to be destroyed by it. This is also the case with the Mocking-bird and the Ferruginous Thrush, many individuals of which I have known to be killed by these parasitic animals.

Although the Cat-bird is a pleasant songster, it is seldom kept in a cage, and I believe all attempts at breeding it in aviaries have failed. Its food consists of fruits and berries of all descriptions, worms, wasps, and various

other insects. Its flight is low, often rapid, and somewhat protracted, generally performed by glidings, accompanied with sudden jerks of the tail. It moves on the ground with alertness and grace, not unfrequently going before a person the whole length of the garden-walk.

The nest of the Cat-bird is large, composed externally of dry twigs and briars, mixed with withered leaves, weeds, and grass, and lined with black fibrous roots, neatly arranged in a circular form. The eggs are from four to six, of a plain glossy greenish-blue, without spots. Two and sometimes three broods are raised in the season.

I have placed a pair of these birds on a branch of the *blackberry bush*, on the fruit of which they feed. The young attain their full plumage before they depart in autumn.

CAT-BIRD, *Turdus lividus*, Wils. Amer. Orn., vol. ii. p. 90.
TURDUS FELIVOX, Bonap. Syn., p. 75.
ORPHEUS FELIVOX, *Cat-bird*, Swains & Rich. F. Bor. Amer., vol. ii. p. 192.
CAT-BIRD, *Turdus felivox*, Nutt. Man., vol. ii. p. 332.
CAT-BIRD, *Turdus felivox*, Aud. Orn. Biog., vol. ii. p. 171; vol. v. p. 440.

Adult Male.

Bill of moderate length, rather weak, slightly arched, broad at the base, compressed, towards the end acute; upper mandible with the ridge rather acute, the sides convex, the edges sharp, the tip a little declinate; lower mandible nearly straight. Nostrils basal, oblong, half closed above by a membrane, and partially concealed by the feathers. Head of ordinary size, neck rather long, general form slender. Feet of ordinary length, slender; tarsus compressed, anteriorly scutellate, acute behind; toes free, scutellate above, the lateral ones nearly equal; hind toe rather stronger; claws compressed, arched, acute.

Plumage soft and blended. Bristles at the base of the bill. Feathers of the hind head longish. Wings of ordinary length, broad, rounded, the fifth quill longest, the fourth nearly equal, the first very short. Tail long, rounded, of twelve straight narrowly rounded feathers.

Bill black. Iris hazel. Feet dark umber. The general colour of the plumage above is blackish-grey, the head and tail brownish-black, as are the inner webs of the quills. The cheeks, and under surface in general, deep bluish-grey, the abdomen paler, and the under tail-coverts brownish-red. The outer tail-feather transversely barred with white on the inner web.

Length 9 inches, extent of wings 12; bill along the ridge $\frac{7}{12}$, along the edge $\frac{9}{12}$; tarsus $1\frac{1}{12}$.

Adult Female.

The female is a little paler in the tints of the plumage, but in other respects is similar to the male.

The Blackberry.

Rubus villosus, *Willd.*, Sp. Pl., vol. ii. p. 1085. *Pursch*, Flor. Amer. Sept., vol. i. p. 346.—Icosandria Polygynia, *Linn.*—Rosaceæ, *Juss.*

This species of bramble is pubescent, prickly, with angular twigs; the leaves ternate or quinate, with ovato-oblong, serrate, acuminate leaflets, downy on both sides; the calycine leaves short, acuminate; the flowers white, in a loose raceme. Blackberries are so plentiful in all parts of the United States, that they are gathered in great quantities, and often exposed for sale in the markets, especially those of the Eastern Districts, where they are applied to various domestic uses. They grow to a remarkably large size in the Southern States, where the plant itself is larger and more productive. In Kentucky and Louisiana, I have observed a variety bearing fruit of a light yellow colour, which is still superior to the common sort in flavour.

END OF THE SECOND VOLUME.

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Digitized with financial assistance from
Observer Research Foundation
on 11 March, 2020